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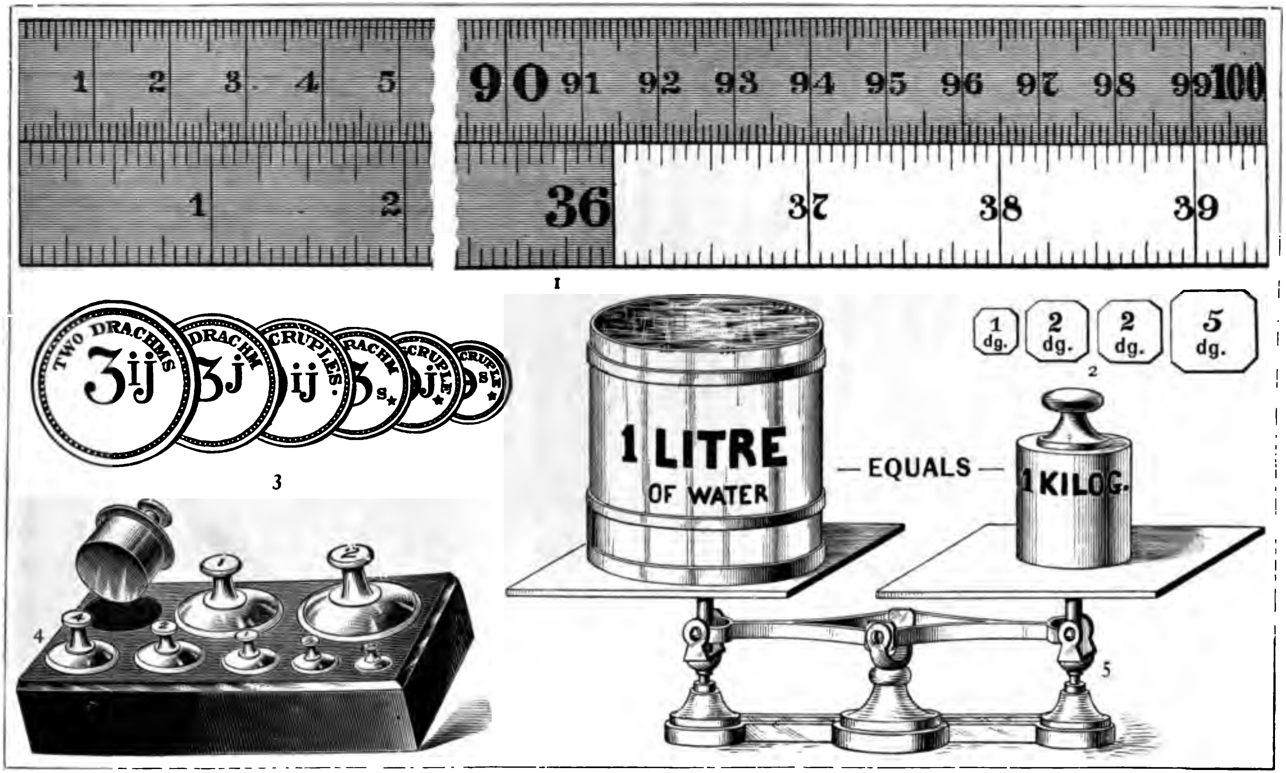

1. Metre measure, graduated also in inches. 2. Metric weights (from 1 to 5 decigrammes). 3. Apothecaries' weights (from ½ scruple to 2 drachms). 4. Apothecaries' weights (from ¼ ounce to 2 pounds: *reduced*). 5. Comparison of metric fluid and solid weights (showing that 1 litre of water weighs 1000 grammes: *reduced*).

DOSE-BOOK

AND

MANUAL OF

PRESCRIPTION-WRITING

WITH A LIST OF THE

Official Drugs and Preparations, and Many of
the Newer Remedies with their Doses

BY

E. Q. THORNTON, M.D., PH.G.
Demonstrator of Therapeutics, Jefferson Medical College of Philadelphia

Second Edition, Revised and Enlarged

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1901

TO

DR. HOBART AMORY HARE,

PROFESSOR OF THERAPEUTICS, MATERIA MEDICA, AND HYGIENE IN THE
JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA,

WHOSE TEACHINGS, WRITINGS, AND RESEARCHES HAVE DONE SO MUCH TO
ADVANCE THE KNOWLEDGE OF MEDICINE,

THIS MANUAL IS RESPECTFULLY INSCRIBED.

33079

PREFACE TO THE SECOND EDITION.

IN the revision of this little book, additions have been made to the chapters on "Prescription-Writing" and "Incompatibilities," and appropriate references have been introduced in the text to such of the newer curative sera, organic extracts, synthetic compounds, and vegetable drugs as have been found to be of value. To the Appendix, chapters upon Synonyms, and Poisons and their Antidotes have been added. It being the object of the author to make the volume thoroughly practical and helpful, he has spared no pains to bring it fully up to date.

SEPTEMBER, 1901.

PREFACE.

In preparing this Manual of Prescription-writing the aim of the author has been to compile a work of value to the student of medicine both during his years of study as an undergraduate and in the early period of his professional career. The volume may also prove of value to the practitioner of many years' standing for purposes of reference. In addition to the consideration, under the proper headings, of the composition and strength of all Official preparations intended for internal administration, Weights and Measures, Solubilities, and Incompatibilities, space is given to the grammatical construction of prescriptions, accompanied by example prescriptions illustrating some of the methods of employing the different classes of remedies. Fully recognizing that it is practically impossible to state the exact dose in any given case, and that *maximum* and *minimum* doses are relative terms only, the intention of the author is to present such doses as have by past experience been found suited to the greater number of adults. In stating the doses the quantities have been expressed both in Apothecaries' and Metric systems.

The following authoritative works have been consulted freely in compiling the manual: the *United States Pharma-*

copœia, the *United States Dispensatory*, the *National Dispensatory*, Hare's *Practical Therapeutics*, Hare's *System of Therapeutics*, Pereira on *Prescription-writing*.

The author desires to acknowledge his obligations to Dr. J. Edward Moore in preparing the pages upon the grammatical construction of prescriptions and words used in prescription-writing; to Dr. William M. Sweet in reading the proof and also in preparing the index; and to Mr. John Vansant for valuable assistance of a most varied character as the work was passing through press.

PHILADELPHIA,
December, 1894.

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DOSE-BOOK

AND

MANUAL OF PRESCRIPTION-WRITING.

INTRODUCTION.

DEFINITION OF PHARMACOPŒIA AND DISPENSATORY.

As the Pharmacopœia is the standard by which all official drugs and preparations are compared, and is therefore largely quoted in all works upon therapeutics, materia medica, pharmacy, and prescription-writing, the student should receive some idea concerning the manner of its compilation and publication. A *pharmacopœia* is a book containing the names of all *official drugs* (in some cases also tests as to their purity and methods of detecting adulterations) and preparations, with formulæ and methods for their manufacture. The pharmacopœiæ of most countries are published under governmental control, but the United States Pharmacopœia, although not published by the government, is accepted by it, and is used as a standard in the United States army and navy, the Marine Hospital Service, and in other national departments. It is legalized by some of the States, and official preparations must correspond in strength and in purity with its formulæ.

The United States Pharmacopœia was first issued in 1820, and has been revised and published by the authority of the National Convention for Revising the Pharmacopœia at intervals of ten years. This convention consists of delegates from the various medical and pharmaceutical schools and societies and representatives from the several medical bodies of the government. From the convention a committee of revision is appointed. All drugs and preparations selected to be placed in the Pharmacopœia are said to be *official*, and the Latin names by which they are designated are said to be *official names.*

While it is the object of the committee to recognize all the best and most generally used remedial agents, they must of necessity omit many valuable drugs and preparations for the following among other reasons: (1) From the fact that they have not been sufficiently or long enough used to justify their positive approval; (2) that they are not in *general* use in all parts of the country; (3) that they are proprietary articles. The knowledge that a drug or preparation is not official does not argue against its use, for there are many valuable therapeutic agents not accorded the dignity of a position in the Pharmacopœia. The value of such a book will at once be recognized, as it gives *uniformity* to all official preparations. Such a work should receive the support and encouragement of every true devotee of medicine and pharmacy, for without a standard for making each preparation our pharmacy would be in a state of great confusion.

A *dispensatory* is a book containing not only the names and formulæ of *official* drugs and preparations, but the history, properties, uses, and doses of *all* substances used in medicine. Dispensatories are issued by individual authors; those most extensively used in this country are the "United States Dispensatory," by Wood, Remington, and Sadtler, and the "National Dispensatory," by Stillé, Caspari, and Maisch.

PART I.—WEIGHTS AND MEASURES.

THE weights and measures most generally employed by physicians and pharmacists in the United States are the Troy or Apothecaries' Weights and the Wine or Apothecaries' Measures, although during the past few years these have been replaced largely by the Metric or Decimal System of Weights and Measures. The decimal system has been recognized to such an extent by the Pharmacopœial Committee of Revision as to make it necessary for all medical men to become familiar with it.

1. ENGLISH WEIGHTS AND MEASURES.

TABLE OF TROY OR APOTHECARIES' WEIGHTS.

Pound (*Libra*).		Ounce (*Uncia*).		Drachm (*Drachma*).		Scruple (*Scrupulum*).		Grain (*Granum*).
℔ 1	=	12	=	96	=	288	=	5760
		℥ 1	=	8	=	24	=	480
				ʒ 1	=	3	=	60
						℈ 1	=	20

SYMBOLS AND ABBREVIATIONS FOR APOTHECARIES' OR TROY WEIGHTS.

gr., *Granum*. A grain.
℈, *Scrupulus*. A scruple, equal to 20 grains.
ʒ, *Drachma*. A drachm, equal to 60 grains.
℥, *Uncia*. An ounce, equal to 480 grains.
℔, *Libra*. A pound of 12 ounces of 480 grains each.

TABLE OF WINE OR APOTHECARIES' MEASURES.

Gallon (*Congius*).	Pint (*Octarius*).	Fluidounce (*Fluiduncia*).	Fluidrachm (*Fluidrachma*).	Minim (*Minimum*).
Cong. 1	= 8	= 128	= 1024	= 61440
	O 1	= 16	= 128	= 7680
		f℥ 1	= 8	= 480
			fʒ 1	= ♏ 60

SYMBOLS AND ABBREVIATIONS FOR APOTHECARIES' OR WINE MEASURES.

gtt., *Gutta*. A drop.

♏, *Minimum*. A minim is the 60th part of a fluidrachm.

fʒ, *Fluidrachma*. A fluidrachm is an eighth part of a fluidounce, or 60 minims.

f℥, *Fluiduncia*. A fluidounce, equal to 480 minims, or the 16th of a pint.

O, *Octarius*. A pint of 16 fluidounces.

Cong., *Congius*. A gallon of 8 pints or 128 fluidounces.

APPROXIMATE FLUID MEASURES.

Teaspoonful (*cochlear parvum*)	=	fʒj.
Dessertspoonful (*cochlear medium*)	=	fʒij.
Tablespoonful (*cochlear magnus*)	=	fʒiv.
Wineglass (*cyathus vinarius*)	=	f℥ij
Teacup (*poculum*)	=	f℥iv.

These household measures vary so greatly that it is advisable to measure all liquid prescriptions in graduated medicine-glasses.

A drop is popularly, although erroneously, supposed to be a minim. True, there are 60 drops in a fluidrachm of water, but this is the case with only a few liquid medicines. The size of a drop depends on the shape of the vessel from which it is being dropped and on the adhesiveness of the fluid dropped; consequently, a drop is a very indefinite quantity. Tinctures, spirits, and other alcoholic fluids drop from 120 to 150 drops to the fluidrachm, whereas thick syrups and a few other liquids drop less than 60 drops to the fluidrachm.

Avoirdupois weights and Imperial measures are occasionally met with, and the tables given below are for the purpose of comparison. It will be observed that the Avoirdupois pound is composed of 16 ounces, of 437½ grains each; the Apothecaries' (or Troy) pound contains only 12 ounces, but each ounce has 480 grains. The Imperial measure differs from the Apothecaries' measure in the following respects: the *weight* of an Imperial ounce of distilled water is 437½ grains, that of the wine (or Apothecaries' fluid-) ounce $455\frac{7}{10}$ grains; the Imperial pint contains 20 fluidounces, the wine pint only 16 ounces.

TABLE OF AVOIRDUPOIS WEIGHTS.

Pound (*Libra*).		Ounce (*Uncia*).		Grain (*Granum*).
℔ 1	=	16	=	7000
		oz. 1	=	437½

TABLE OF IMPERIAL MEASURES.

Gallon (*Congius*).		Pint (*Octarius*).		Fluidounce (*Fluiduncia*).		Fluidrachm (*Fluidrachma*).		Minim (*Minimum*).
Cong. 1	=	8	=	160	=	1280	=	76800
		O 1	=	20	=	160	=	9600
				fl. oz. 1	=	8	=	480
						fl. dr. 1	=	min. 60

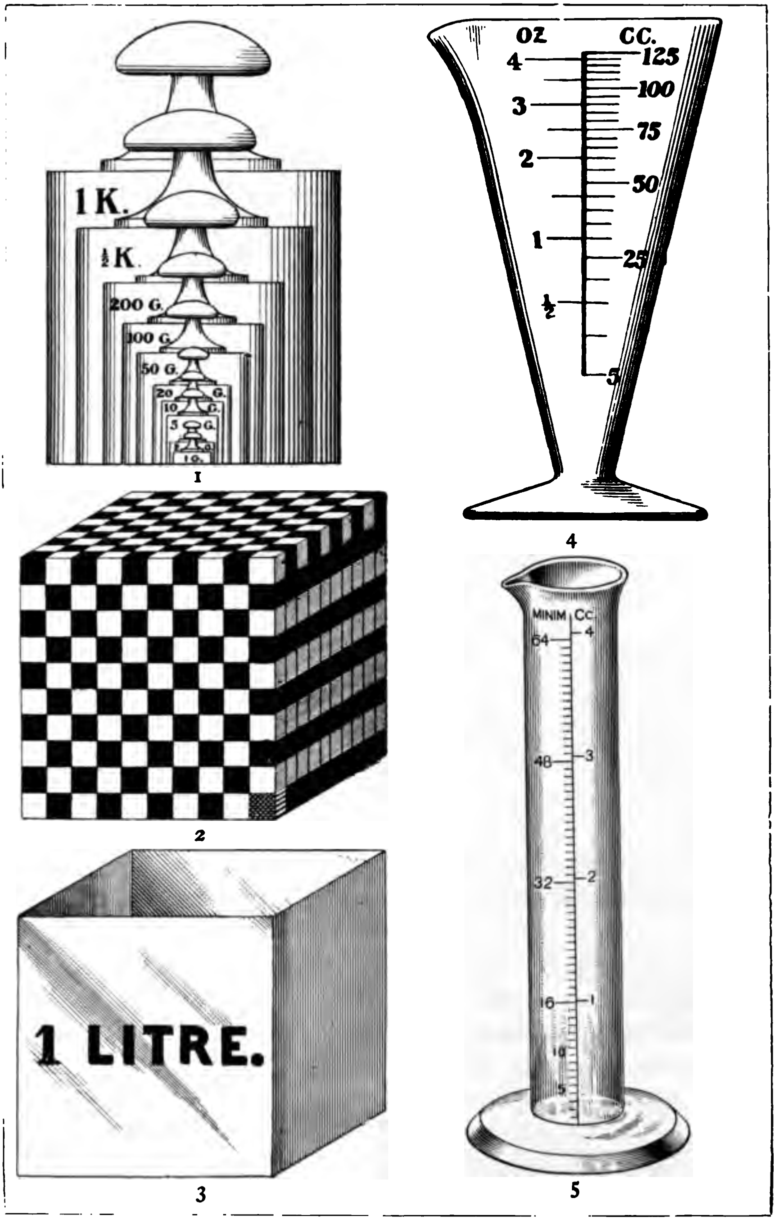
2. METRIC SYSTEM.

This system of weight, length, and capacity is now being used by a great number of physicians in prescribing and in medical writings, and its adoption into the United States Pharmacopœia makes it obligatory upon physicians to familiarize themselves with it.

The unit upon which all calculations are based is the unit of *length*, the *Metre*, which is the forty-millionth part of the circumference of the earth around its poles. From this is derived the unit of *capacity*, the *Litre*, which is the *cube* of one-tenth part of a Metre. From the Litre is derived the unit of *weight*, the *Gramme*, which is the one-thousandth part of the weight of a Litre of distilled water at its maximum density.

Now, to comprehend this system it is necessary for the student to understand clearly the above terms before going more deeply into the subject; therefore, to make haste slowly, let it be asked, What is a Metre? For the sake of clearness the question may be answered in the following homely manner: Suppose a string should be stretched around the earth, and this string then be cut into forty million (40,000,000) equal lengths; each of these lengths will represent a *Metre*, and by measurement will be $39\frac{370432}{10000000}$ inches. If there be made a square tin box $\frac{1}{10}$ of a Metre ($3\frac{93}{100}$ inches) deep, $\frac{1}{10}$ of a Metre long, and $\frac{1}{10}$ of a Metre broad—in other words, a box which would be a cubic decimetre—this box would hold one *Litre*, which by measure would be $2\frac{113433}{1000000}$ wine pints. If this Litre measure be filled with distilled water at its maximum density, the weight of this water would be 1000 Grammes; or, if one thousand little cups be made, each holding one-thousandth part of a Litre, and each little cup be filled with distilled water at its maximum density (4° C.), and then weighed, a cup will be found to hold $15\frac{432}{1000}$ grains of water, this being known as a *Gramme*. Let it be clearly fixed in mind that the *Metre*, the unit of *length*, is the $\frac{1}{40000000}$ of the earth's circumference around the poles, and is $39\frac{370432}{10000000}$ inches in length, or about three and one-third inches longer than a yard. The *Litre*, the unit of *capacity*, is the cube of one-tenth part of a Metre, and holds $2\frac{113433}{1000000}$ pints, or $33\frac{815}{1000}$ fluidounces. The

PLATE II.



1. Metric weights (from 1 Gramme to 1 Kilogramme). 2. Cubic decimetre (one-fourth natural size). 3. Litre measure (one-fourth natural size). 4. Double-scale 4-oz. graduate (one-fourth natural size). 5. Double-scale *minim* glass (natural size).

Gramme, the unit of weight, is the weight of that quantity of water at its maximum density that will fill the cube of $\frac{1}{100}$ part of a Metre, and weighs $15\frac{432}{1000}$ + grains.

Contrary to the popular opinion, this system is not difficult to master, and it only requires the same amount of study that would be necessary to master any other system of weights and measures. It is as easy to convert Grammes into decigrammes, centigrammes, and milligrammes as to convert dollars into dimes, cents, and mills; in fact, the method of so doing is precisely the same: as one dollar is equal to ten dimes, to one hundred cents, or to one thousand mills, so one *Gramme* is equal to ten *decigrammes*, to one hundred *centigrammes*, or to one thousand *milligrammes*. More difficulty is experienced in converting the ordinary weights and measures into the corresponding metric weights and measures, and *vice versâ*, but by a little study and by following the simple rules given below any one can readily learn the system.

First, *thoroughly* learn the metric tables, so that there will be no trouble in readily repeating them. Ask yourself how many milligrammes, centigrammes, or decigrammes there are in a Gramme; how many Grammes in a *Dekagramme*, *Hectogramme*, *Kilogramme*, or *Myriagramme*. Next, learn the abbreviation for each of the divisions and multiples of the Gramme, Litre, and Metre. It will be noticed that the units Gramme, Litre, and Metre, and all *multiples* of the Gramme, Litre, and Metre, are written with capital letters, Greek prefixes being used—thus, Deka-, Hecto-, Kilo-, Myria-; whereas all divisions of the units are written with small letters, and Latin prefixes are used, as deci-, centi-, milli-. Finally, learn to read and write the divisions and multiples of the Gramme, Litre, and Metre. Read: Gm. 1.; Gm. 15.; Gm. 1000.; Gm. .1; Gm. .01; C.c. 1.; C.c. .1.

The phraseology, division, and multiplication of this system are very similar to those of our monetary system. *Gm.* is the abbreviation for Gramme, to be distinguished from *gr.*, the abbreviation for grain. Deka- and deci- must not be confounded. Great care must be used in the employment of the decimal point, for should it be incorrectly placed it is liable to cause most serious consequences.

In reading, the word *decigramme* is rarely used, but more frequently the word *centigrammes* or *milligrammes* is employed, upon the same principle that one rarely says *dime*, but rather *ten cents*. Gm. .065 would be read *sixty-five milligrammes*, instead of *six centigrammes and five milligrammes*. Gm. .0655 is read sixty-five and five-tenths milligrammes. Gramme is pronounced *gram*, not *gram-mēē*.

METRIC TABLE OF LENGTHS.

10 millimetres	make	1 centimetre.
10 centimetres	"	1 decimetre.
10 decimetres	"	1 Metre.
10 Metres	"	1 Dekametre.
10 Dekametres	"	1 Hectometre.
10 Hectometres	"	1 Kilometre.
10 Kilometres	"	1 Myriametre.

Abbreviations for the different divisions and multiples of the Metre, with their corresponding equivalents in inches, are as follows:

1 millimetre	is written	1 mm. or M. .001,	equal	in inches to	.039370432
1 centimetre	"	1 cm. or M. .01.	"	"	.39370432
1 decimetre	"	1 dm. or M. .1.	"	"	3.9370432
1 Metre	"	1 M. or M. 1.	"	"	39.370432
1 Dekametre	"	1 Dm. or M. 10.	"	"	393.70432
1 Hectometre	"	1 Hm. or M. 100.	"	"	3937.0432
1 Kilometre	"	1 Km. or M. 1000.	"	"	39370.432
1 Myriametre	"	1 Mm. or M. 10000.	"	"	393704.32

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ord *micromillimetre* (mkm.), which is sometimes used scopists, signifies $\frac{1}{1000}$ of a *millimetre.*

METRIC TABLE OF CAPACITIES.

10 millilitres	make	1 centilitre.
10 centilitres	"	1 decilitre.
10 decilitres	"	1 Litre.
10 Litres	"	1 Dekalitre.
10 Dekalitres	"	1 Hectolitre.
10 Hectolitres	"	1 Kilolitre.
10 Kilolitres	"	1 Myrialitre.

eviations for the different divisions and multiples of e, with their corresponding equivalents in minims es, are as follows:

litre	is written	1 C.c.[1]	or L. .001,	equal	in minims to	16.23
ilitre	"	1 cl.	or L. .01,	"	"	162.3
litre	"	1 dl.	or L. .1,	"	"	1623.
e	"	1 L.	or L. 1,	"	ounces to	33.815
alitre	"	1 Dl.	or L. 10,	"	"	338.15
tolitre	"	1 Hl.	or L. 100,	"	"	3381.5
olitre	"	1 Kl.	or L. 1000,	"	"	33815.
ialitre	"	1 Ml.	or L. 10000,	"	"	338150.

METRIC TABLE OF WEIGHTS.

10 milligrammes	make	1 centigramme.
10 centigrammes	"	1 decigramme.
10 decigrammes	"	1 Gramme.
10 Grammes	"	1 Dekagramme.
10 Dekagrammes	"	1 Hectogramme.
10 Hectogrammes	"	1 Kilogramme.
10 Kilogrammes	"	1 Myriagramme.

oreviations for the different divisions and multiples of the Gramme, with their corresponding equivalents, are as follows:

---

[1] C.c. (cubic centimetre) is used instead of ml.

1 milligramme	is written	1 mg. or Gm. .001,	equal in grains to	.015432
1 centigramme	"	1 cg. or Gm. .01,	" "	.15432
1 decigramme	"	1 dg. or Gm. .1,	" "	1.5432
1 Gramme	"	1 Gm. or Gm. 1,	" "	15.432
1 Dekagramme	"	1 Dg. or Gm. 10	" "	154.32
1 Hectogramme	"	1 Hg. or Gm. 100	" "	1543.2
1 Kilogramme	"	1 Kg. or Gm. 1000	" "	15432.3
1 Myriagramme	"	1 Mg. or Gm. 10000	" "	154323.4

3. METHOD OF CONVERTING METRIC WEIGHTS, MEASURES, AND LENGTHS INTO THOSE MORE ORDINARILY USED, AND VICE VERSA.

So far, attention has been directed only to the Metric system and its corresponding equivalents. Were it not for the fact that changes are now being made from the English to the Metric system, and that both systems are still largely in use by physicians in prescription-writing and in medical publications, we would not be confronted with the difficulty of giving methods for converting one system into the other. To be able to convert one system into the other, the following table of approximate weights, measures, and lengths must be committed to memory:

APPROXIMATE TABLE OF WEIGHTS.

1 grain = .065 Gm. (65 milligrammes).
15½ grains = 1. Gm.
1 Troy drachm = 3.9 Gm.
1 " ounce = 31.1 Gm.

APPROXIMATE TABLE OF CAPACITIES.

1 minim = .06 C.c.
16 minims = 1. C.c.
1 fluidrachm = 3.7 C.c.
1 fluidounce = 30. C.c.

APPROXIMATE TABLE OF LENGTHS.

1 inch = .025 M. (25 millimetres).
39.37[1] inches = 1. M.

WEIGHTS.

To Convert Grains into the Corresponding Metric Equivalents.

By referring to the table of approximate weights it will be seen that *1 grain* is equal to Gm. .065[2] (65 milligrammes); in order, then, to convert *grains* or the fractions of a *grain* into the corresponding metric quantity, multiply the number of grains by .065; thus, if one grain is equal to Gm. .065,

2 grains are equal to 2 × .065 = .130 Gm.;
60 grains are equal to 60 × .065 = 3.9 Gm.;
$\frac{1}{2}$ a grain is equal to $\frac{1}{2}$ of .065 = .0325;
$\frac{1}{100}$ of a grain is equal to $\frac{1}{100}$ of .065 = .00065, etc.

To Convert the Metric Quantities into their Equivalent in Grains.

Instead of multiplying as above, simply divide, using the same number, .065; thus, if Gm. .065 (65 milligrammes) is equal to 1 grain,

Gm. .130 is equal to .130 ÷ .065 = 2 grains;
Gm. 3.9 " 3.9 ÷ .065 = 60 grains;
Gm. .0325 " .0325 ÷ .065 = .5 grain;
Gm. .00065 " .00065 ÷ .065 = .01 grain.

To convert Apothecaries' drachms into Grammes, *multiply* the number of drachms by 3.9 Gm., which is the number of Grammes in 1 drachm. To convert Grammes into Apothecaries' drachms, *divide* the number of Gm. by 3.9 Gm. The same rule is followed in converting Apothecaries' ounces into Grammes and Grammes into ounces, 31.1 Gm. being used, this being equivalent to an ounce.

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[1] More accurately, 39.370432.

[2] If great accuracy is required, multiply by .0648.

CAPACITIES.

To convert minims into the corresponding metric equivalents, *multiply* the number or fractions of minims by .06 C.c. (.06 cubic centimetres), this being the equivalent in C.c. of 1 minim. To convert the metric quantities into the corresponding equivalents in minims, *divide* the metric quantity by .06 C.c. To convert fluidrachms into C.c., *multiply* the number of drachms by 3.7 C.c., the equivalence in C.c. of 1 fluidrachm. To convert C.c. into fluidrachms, *divide* the number of C.c. by 3.7. To convert fluidounces into C.c., *multiply* the number of ounces by 30 C.c., the equivalence in C.c. of 1 fluidounce. To convert C.c. into fluidounces, *divide* the number of C.c. by 30.

LENGTHS.

To convert inches into millimetres, *multiply* the number of inches by 25 millimetres, the number of millimetres in 1 inch. To convert millimetres into inches, *divide* the number of millimetres by 25. To convert inches into Metres, *divide* the number of inches by 39.37 inches, the number of inches in 1 Metre. To convert Metres into inches, *multiply* the number of Metres by 39.37.

EQUIVALENTS OF APOTHECARIES' IN METRIC WEIGHTS.

Grain.		*Gramme.*	*Grain.*		*Gramme.*
$\frac{1}{1000}$	=	.000064	$\frac{1}{150}$	=	.00043
$\frac{1}{500}$	=	.000129	$\frac{1}{120}$	=	.00054
$\frac{1}{400}$	=	.000162	$\frac{1}{100}$	=	.00064
$\frac{1}{300}$	=	.000216	$\frac{1}{75}$	=	.00086
[illegible]	=	.000258	$\frac{1}{64}$	=	.00101
[illegible]	=	.000324	$\frac{1}{60}$	=	.00108

Grain.		*Gramme.*	*Grain.*		*Gramme.*
$\frac{1}{50}$	=	.00129	15	=	.9720
$\frac{1}{48}$	=	.00135	16	=	1.0368
$\frac{1}{40}$	=	.00162	17	=	1.1016
$\frac{1}{36}$	=	.00180	18	=	1.1664
$\frac{1}{32}$	=	.00202	19	=	1.2312
$\frac{1}{30}$	=	.00216	20	=	1.2960
$\frac{1}{25}$	=	.00259	21	=	1.3608
$\frac{1}{24}$	=	.00270	22	=	1.4256
$\frac{1}{20}$	=	.00324	23	=	1.4904
$\frac{1}{18}$	=	.00360	24	=	1.5552
$\frac{1}{16}$	=	.00405	25	=	1.6200
$\frac{1}{12}$	=	.00540	26	=	1.6848
$\frac{1}{10}$	=	.00648	27	=	1.7496
$\frac{1}{8}$	=	.0081	28	=	1.8144
$\frac{1}{6}$	=	.0108	29	=	1.8792
$\frac{1}{5}$	=	.0129	30	=	1.9440
$\frac{1}{4}$	=	.0162	31	=	2.0088
$\frac{1}{3}$	=	.0216	32	=	2.0736
$\frac{1}{2}$	=	.0324	33	=	2.1384
1	=	.0648	34	=	2.2032
2	=	.1296	35	=	2.2680
3	=	.1944	36	=	2.3328
4	=	.2592	37	=	2.3976
5	=	.3240	38	=	2.4624
6	=	.3888	39	=	2.5272
7	=	.4536	40	=	2.5920
8	=	.5184	41	=	2.6568
9	=	.5832	42	=	2.7216
10	=	.6480	43	=	2.7864
11	=	.7128	44	=	2.8512
12	=	.7776	45	=	2.9160
13	=	.8424	46	=	2.9808
14	=	.9072	47	=	3.0456

Grain.		*Gramme.*	*Ounce.*		*Gramme.*
48	=	3.1104	1	=	31.103
49	=	3.1752	1½	=	46.656
50	=	3.2400	2	=	62.207
51	=	3.3048	2½	=	77.760
52	=	3.3696	3	=	93.310
53	=	3.4344	4	=	124.414
54	=	3.4992	5	=	155.517
55	=	3.5640	6	=	186.621
56	=	3.6288	7	=	217.724
57	=	3.6936	8	=	248.828
58	=	3.7584	9	=	279.930
59	=	3.8232	10	=	311.035
Drachm.		*Gramme.*	11	=	342.138
1	=	3.888	12	=	373.242
1½	=	5.832	14	=	435.449
2	=	7.776	16	=	497.656
2½	=	9.720	20	=	622.070
3	=	11.664	24	=	746.484
3½	=	13.608	30	=	933.105
4	=	15.552	32	=	995.312
4½	=	17.496	48	=	1492.968
5	=	19.440	64	=	1990.624
6	=	23.328	100	=	3110.350
7	=	27.216			

EQUIVALENTS OF APOTHECARIES' IN METRIC MEASURES.

Minims.		*Cubic centimetres.*	*Minims.*		*Cubic centimetres.*
1	=	0.061	7	=	0.431
2	=	0.123	8	=	0.493
3	=	0.185	9	=	0.554
4	=	0.246	10	=	0.616
5	=	0.308	11	=	0.678
6	=	0.370	12	=	0.739

Minims.		*Cubic centimetres.*
13	=	0.801
14	=	0.862
15	=	0.924
16	=	1.00
17	=	1.06
18	=	1.12
20	=	1.23
30	=	1.84
40	=	2.46
50	=	3.08

Fluidrachms.		*Cubic centimetres.*
1	=	3.7
2	=	7.39
3	=	11.09
4	=	15.00
5	=	18.50
6	=	22.50
7	=	26.00

Fluidounces.		*Cubic centimetres.*
1	=	30.00[1]
2	=	59.14
3	=	89.00
4	=	118.29
5	=	148.00
6	=	177.42
7	=	207.00
8	=	236.59
9	=	266.16
10	=	295.73
12	=	355.00
14	=	414.00
16	=	473.17
18	=	532.32
20	=	591.50
22	=	650.62
24	=	710.00
32	=	946.35
$33\frac{814}{1000}$	=	1000.00
128	=	3785.43

EQUIVALENTS OF INCHES IN METRIC LENGTH.

Inches.		*Millimetres.*
$\frac{1}{25}$	=	1.00
$\frac{1}{12}$	=	2.11
$\frac{1}{8}$	=	3.17
$\frac{1}{4}$	=	6.35
$\frac{1}{2}$	=	12.70
$\frac{2}{3}$	=	16.92
$\frac{3}{4}$	=	19.05
1	=	25.4
2	=	50.8
3	=	76.2

Inches.		*Millimetres.*
4	=	102.0
5	=	127.0
6	=	152.4
7	=	177.8
8	=	203.2
9	=	228.6
10	=	254.0
11	=	279.0
12	=	304.8

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[1] The more accurate equivalent is 29.57 C.c.

EQUIVALENTS OF CENTIMETRES IN INCHES.

Centimetres.		*Inches.*	*Centimetres.*		*Inches.*
1.27	=	½	17.78	=	7
2.54	=	1	20.32	=	8
5.08	=	2	22.86	=	9
7.62	=	3	25.4	=	10
10.16	=	4	27.94	=	11
12.70	=	5	30.48	=	12
15.24	=	6			

To familiarize students with the essential features of the Metric system, a series of Questions and Answers are given in the Appendix (p. 336).

PART II.—PRESCRIPTION-WRITING.

The word *prescription* by general acceptance means a physician's written formula for medicines, accompanied by directions for compounding and administering. In a broader sense the meaning of the word may be extended to include not only an order for medicines, but also for food, for change of climate, for modification of dress, or, in fact, any directions given to cure or to relieve the patient.

A *simple* prescription is one consisting of a single remedy; a *compound* prescription is made up of two or more ingredients. The term "shot-gun" prescription is aptly applied to that unscientific form of compound into which a large number of remedies enter, the hope of the prescriber being that some one of the ingredients, by lucky chance, will *hit* the disease and benefit the patient.

A "kangaroo" prescription is one consisting of drugs that are fleeting in their action, ordered to be taken at longer intervals between doses than they continue to exert their influence upon the system. The name is suggestive of long leaps. An example of such a prescription would be one for diluted hydrocyanic acid ordered given at intervals of five hours. As is well known, this substance is very transitory in its action, and ceases to exert its influence about thirty minutes after ingestion; consequently, if taken only every five hours, the patient would be affected by the medicine only a very short while during the intervals between doses.

Official prescriptions are those whose formulæ are given in the Pharmacopœia, and are kept ready prepared, while *magistral* or *extemporaneous* prescriptions are such as are prepared only at the time and upon the formulæ of the prescriber. It is in writing extemporaneous prescriptions that the young practitioner is likely to meet with difficulty, and in such writings considerable knowledge of therapy, of chemistry, and of pharmacy is required.

Prescriptions may further be divided into *solid*, such as pills, powders, and suppositories, and *liquid*, such as emulsions, mixtures, and solutions.

The names of the ingredients of the prescription and the directions to the compounder are written in Latin. When the drug is official the *official name* should always be used. While it is not imperative that Latin should be used in prescription-writing, the following reasons will demonstrate its great advantages over the English or any of the modern languages:

1st. Latin is the language of science, and is the source from which all branches of science derive their technical names. There is no reason why this general rule in naming drugs should be disregarded.

2d. Being a dead language, it is not liable to undergo changes. This ensures the perpetuity of the name given the drug.

3d. It is more or less understood the world over, and is therefore capable of ready interpretation in all countries.

4th. Not infrequently it is best that the patient should not know what he is taking. It is well known that many persons are prejudiced against certain drugs; for instance, calomel is a drug that many would absolutely refuse to take, or would do so with little hope of being benefited or with much fear of being injured. By using the Latin names the physician frees himself from these annoyances, and places himself on the vantage-ground of not having his own judgment affected by the imaginary fears of the patient.

The general formula for a compound prescription is as follows:

1st. Name of the patient.
2d. Superscription, or heading.
3d. Inscription, or ingredients.
4th. Subscription, or directions to the compounder.
5th. Signatura, or directions to the patient for taking.
6th. Name of physician, with date.

The name of the patient should always be written upon the prescription and transferred by the apothecary upon the label. This is often neglected by the physician, but when it is borne in mind that frequently more than one person in the household is taking medicine, and if a prescription is written for each of them at the same visit there is a possibility of confusion, or, it may be, more serious consequences, the importance of the matter will be fully seen. The name on the prescription is also a safeguard to the compounder, as he may know whether the remedy is intended for an adult or for a child; and, again, the doctor may wish to look at a prescription written some days before, and if he has some idea of the date he would have little trouble in finding the prescription on the file of the apothecary. There are, however, circumstances under which it may be well to omit the name; as, for instance, when ordering injections or suppositories.

The symbol ℞, which follows the name of the patient, is an abbreviation of the Latin verb *Recipe*, which means "Take" or "Take thou." For all practical purposes it says to the compounder, "Take thou of the following substances." The ancients began prescriptions with pious or with superstitious symbols or sentences, such as + (the sign of the cross); *α* and *ω*, the first and last letters of the Greek alphabet, Christ being designated the "Alpha and Omega," "the beginning and the ending;" pious invocations to heathen deities were also placed at the head of prescriptions. The stroke across the ℞ is a remnant of these former superstitions.

The inscription or ingredients form the most important part of the prescription, and may consist of the *basis*, the *adjuvant*, the *corrective*, the *vehicle* in liquid prescriptions, and the *excipient* in solid prescriptions. The *basis*, which is the principal ingredient, is written first. This is the only ingredient that is always necessary, for very often any one or all of the adjuvants may be dispensed with. In fact, none of them are to be used unless there is some clear reason why they should enter into the composition of the prescription. The *adjuvant* is something added to the base to assist in its action. For instance, in feeble circulation digitalis might be given to stimulate the heart, and to this belladonna might be added as an adjuvant to stimulate the arterial system, thereby bringing about a better condition of the circulation than would result from either one of the remedies if used singly. In purgative pills it is frequently necessary to use several substances as adjuvants to the principal ingredient. As an example there may be cited a pill composed of mild mercurous chloride, podophyllin, and aloin. In this prescription the first and second remedies increase the flow of bile, and act also upon the small intestine, while aloin exerts its dominant effect upon the large intestine. The tendency of all three is to move the bowels, but the latter two articles may be considered as being adjuvants to the first remedy.

The *corrective* is added for the purpose of overcoming some undesirable effect of the basis or adjuvant or to disguise its taste or its odor.

In the foregoing prescription for purgative pills something should be added to prevent them from griping the patient. This may be accomplished by adding to the formula extract of hyoscyamus. The extract is therefore the corrective.

The *vehicle* is the carrier, diluent, or solvent in *liquid* prescriptions. It is to be written last, and is frequently convenient in fixing the dose. Aromatic waters, syrups, and mild tinctures are frequently used as vehicles. The *excipient* is something added to *solid* prescriptions, such as pills, troches, and masses, to give them adhesiveness and consistency, or to dilute the substance if it is irritating or caustic in its effect upon the mucous membrane. Vegetable extracts, such as those of glycyrrhiza, gentian, or taraxacum, together with confection of rose, soap, glycerite of starch, and syrups, are some of those most commonly used.

Each ingredient, with the quantity to be used, should be written upon a separate and distinct line in the following order:

1st. Basis.
2d. Adjuvant.
3d. Corrective.
4th. Vehicle or excipient.

The use of synonyms may result in disappointment and perhaps disaster, and is to be carefully avoided in designating the names of the ingredients.

A few examples in which the use of a synonym may result in procuring different drugs are as follows: "Poke-root" may mean *Phytolacca radix* or *Veratrum viride;* "Snakeroot" is a synonym of *Serpentaria*, *Cimicifuga*, and several other roots; "Yellow root" is a synonym of *Xanthorrhiza* or *Hydrastis;* "Analgesin" of Antipyrine, Acetanilidum, and Phenacetin. "Wintergreen" is synonymous with *Chimaphila* and *Gaultheria*, and "Wormseed" with *Santonica* and *Chenopodium.*

Correct and careful abbreviations in writing the names of the ingredients of prescriptions is permissible, and is sanctioned by common custom. Great care, however, should be observed to use no abbreviations that can possibly be misunderstood. The following are illustrations of imperfect abbreviations :

Acid. Hydroc. Dil.	Acidum Hydrochloricum Dilutum, Acidum Hydrocyanicum Dilutum.
Acid. Nit.	Acidum Nitricum, Acidum Nitrosum.
Acid. Sulph.	Acidum Sulphuricum, Acidum Sulphurosum.
Aconit.	Aconitum, Aconitina.
Aquæ Chlor.	Aqua Chlori, Aqua Chloroformi.
Calcii Iod.	Calcii Iodas, Calcii Iodidum.
Cal. Sulph.	Calcii Sulphas, Calcii Sulphis, Calx Sulphura.
Chlor.	Chloral, Chloroformum.
Hyd. Chlor.	Hydrargyri Chloridum Corrosivum, Hydrargyri Chloridum Mite, Chloral Hydras.
Cinchon. Sulph.	Cinchonidinæ Sulphas, Cinchoninæ Sulphas.
Elat.	Elaterinum, Elaterium.
Hyosc. Hydrobrom.	Hyoscinæ Hydrobromas, Hyoscyaminæ Hydrobromas.
Magnesii Sulph.	Magnesii Sulphas, Magnesii Sulphis.
Podophyl.	Podophyllum, Podophyllinum.

Potass. Sulph.	Potassa Sulphurata, Potassii Sulphas, Potassii Sulphis.
Quin. Sulph.	Quinidinæ Sulphas, Quininæ Sulphas.
Sodii Chlor.	Sodii Chloras, Sodii Chloridum.
Sodii Nitr.	Sodii Nitras, Sodii Nitris.
Sodii Sulph.	Sodii Sulphas, Sodii Sulphis.
Sulph.	Sulphonal, Sulphur.

The following is a model of a compound prescription, with the method of calculating the dose. The prescription is intended as a simple fever-mixture. Write down first the principal ingredient, tincture of aconite, of which it is desired to give half a minim at each dose; next the adjuvant, spirit of nitrous ether, of which it is desired to give five minims at each dose; next the corrective, in this case syrup of orange, of which it is desired to give in each dose ten minims; lastly, write for the vehicle, water, a sufficient quantity to make a teaspoonful of the whole prescription in each dose. Having decided upon the number of doses the patient is to receive, which in this case is sixteen, we multiply the quantity of each individual substance by the number of doses in the prescription:

Name of patient: Anna Bell.
Superscription: ℞.
Inscription:
Basis, ½ minim each dose. Tincturæ aconiti, 16× ½♏ = ♏viij.
Adjuvant, 5 " " " Spiritus ætheris nitrosi, 16× 5♏ = fʒj⅓.
Corrective, 10 " " " Syrupi aurantii, 16× 10♏ = fʒij⅔.
Vehicle, sufficient to make each dose 1fʒ, Aquæ q. s. ad 16×1ʒ = f℥ij.
Directions to the apothecary: Misce.
Directions to patient: Sig. Teaspoonful in a little water every two hours.
Name of physician with date: A. E——, M. D., Sept. 19, 1901.

Calculations in Writing Metric Prescription.

Each dose.		Exact.	Approximate.
0.06 c.c.	Tincturæ aconiti,	16 × 0.06 = c.c. 0.96;	c.c. 1.00
0.30 c.c.	Spiritus ætheris nitrosi,	16 × 0.30 = c.c. 4.80;	c.c. 5.00
0.60 c.c.	Syrupi aurantii,	16 × 0.60 = c.c. 9.60;	c.c. 10.00
Sufficient quantity of water to make each dose 4 c.c.	Aquæ, q. s. ad	16 × 4.00 = c.c. 64.00;	c.c. 64.00

In writing prescriptions, it is customary to express the quantities in Roman numerals when employing the Apothecaries' weights and measures, and in Arabic numerals when employing the Metric system.

If the dose is very large or unusual, it should so be expressed on the prescription, that the pharmacist will not hesitate to compound it at once. The motto of a careful compounder of prescriptions is "when in doubt see the prescriber." Of course this consumes time, which is often a matter of grave importance to a very ill patient. There are several ways of indicating unusual doses. A simple method is to *underscore* the unusual dose; by so doing the apothecary understands it is your intention to give the quantity written for, even though it be unusual. Other means of indicating unusual doses are *to place an exclamation-point* (!) *after the quantity*, or to use *both* Roman and Arabic numerals. Probably the best way is to write at the bottom of the prescription, *Correct.*

It may be stated here that all physicians are liable to mistakes; therefore if a pharmacist calls upon you to rectify an error or to explain some point about a prescription or to consult you about the dose, treat him civilly and thank him for his trouble. The educated pharmacist will always protect the physician's interest; accordingly, if the physician at some time should detect some apparent fault in the compounder's work, he should not be too ready to condemn him.

The Subscription, or Direction to the Apothecary.— Directions to the druggist regarding the compounding of medicines should be written in Latin. The word *misce*, "mix," is used whenever a prescription calls for an extemporaneous preparation containing more than one ingredient. Following *misce*, directions as to the form of preparation desired should be given; for example, if pills are called for, *Fac ut sit massa et in pilulas duodecim divide*—Make into a mass and divide into twelve pills; or, *Fiat massa et in pilulas duodecim dividatur*—Let a mass be made and divided into twelve pills. For a powder to be put in capsules: *In partes æquales decem divide et in capsulas pone*—Divide into ten equal parts and put into capsules. For solutions, mixtures, emulsions, etc.: *Fiat solutio*—Let a solution be made; *Fiat mistura*—Let a mixture be made, etc., the verb *fiat* being followed by the noun in the nominative case. When specific directions are not given, let the prescription be compounded according to the rules of the art—*fiat secundum artem.*

The signatura, or direction to the patient, is to be written out *fully* in English, and is to be copied upon the label by the druggist precisely as it is written.

If it be desired to give "one teaspoonful in a wineglass of water every two hours," write it out fully, and *not*, as it is so frequently written, "Teaspoonful as directed," or "Use as directed," or sometimes simply "As directed." The patient with his fears and sickness soon forgets any verbal directions, and often inquires of the pharmacist how he is to use the medicine; in case the pharmacist cannot direct how it is to be taken, the patient often returns to the physician to ascertain how much he is to take, how often, if he is to take it before or after meals, or if it is to be taken in water. If the physician has left his office or he cannot readily be found, valuable time may be lost before the administration of the medicine to the patient begins.

There are prescriptions in which it is better to leave off both the name of the patient and very explicit directions; for instance, urethral injections and vaginal washes should be labelled "Wash," accompanied by an "External-use-only" label. The verbal directions to the patient in such cases should be given very carefully, and at the same time he should be informed that no explicit directions will be written on the label, so that he may thoroughly understand before leaving the office how to use the medicine. The old story of the patient who swallowed the suppository should impress upon the practitioner the importance of clear directions. When the physician is *visiting* a sick person much is to be gained by writing out fully upon a sheet of paper directions for giving medicine, food, etc. Trained nurses always write out the directions given them by the physician either at the time of his visit or immediately after; how much more necessary is it, then, for some one unaccustomed to the care of the sick to have some *written* directions by which to be guided!

Imagine the danger of giving a patient the following two prescriptions, marked "As directed," No. I. intended for internal administration in teaspoonful doses, and No. II. as a vaginal wash by adding two teaspoonfuls to a pint of water:

No. I. Mrs. X——.

℞. Liquoris potassii arsenitis,	♏xxiv;
Aquæ,	f℥iij.—Misce.

Sig. As directed.

No. II. Mrs. X——.

℞. Hydrargyri chloridi corrosivi,	gr. xxiv;
Aquæ,	f℥iij.—Misce.

Sig. As directed.

The question as to placing upon the bottle or the box a "Shake-well-before-using," "For-external-use-only," or "Poison" label is entirely under the physician's control, and he alone should be responsible for its existence or non-existence upon the bottle.

Name of Physician, with Date.—It has become customary for physicians to use blanks upon which the name, address, and office hours are printed. When writing upon such blanks initials are all that is necessary, but in case the prescription is written upon a plain piece of paper always sign the name in full, followed by "M. D.," to show that it has been written by a person authorized to prescribe. The date of writing should always be upon the prescription, and it should be copied upon the label, as it is often a matter of great convenience for future reference. "P. P.," written at the bottom of the prescription, will indicate to the pharmacist that the person for whom it is intended is poor, and will secure as great a reduction in price as can be afforded. The physician should not accept a fee from a patient upon whose prescription he has written "P. P.," as this would be gross injustice to the pharmacist and closely border upon dishonesty.

After the prescription has been written it should be read carefully by the writer, so that he may be able to make any corrections or additions that may be required before it leaves his hands.

In selecting paper upon which to write prescriptions, choose a strong linen paper, which will not easily be torn from the file and be lost. The usual width is about 3 inches, but 4½ inches is far better, as upon blanks of this width the writing will not be cramped unnecessarily. It is better to use a pen than a lead-pencil for writing, as it is more distinct, and in case an unscrupulous druggist has made a mistake in compounding, it will be more difficult for him to cover his mistake by altering the writing. The great importance of writing prescriptions in a clear, legible hand cannot too strongly be urged upon the physician. That the chirography of physicians as a class is bad is a fact well known and commented upon by the laity, and even they do not overestimate the danger to which illegible writing may subject a patient or the perplexity it may cause the compounder.

Prescriptions should be refilled or renewed only upon an order from the prescriber, for the following reasons: (1) A remedy of *value* at one stage of the disease may be *harmful* at another stage; (2) what may be of value to one patient may be injurious or dangerous to another patient with the same disease, on account of some other intercurrent malady; (3) it must be remembered that what the patient considers the disease is frequently only a symptom. Headache and diarrhœa may be due to a number of different causes, and frequently to directly opposite conditions. Imagine the absurdity of a patient using aconite, a remedy of much value in headaches due to overfulness of the blood-vessels of the brain, for a headache due to insufficient blood-supply to the brain, or of taking astringent mixtures for a diarrhœa due to cherry-stones in the bowel!

The following is an amusing instance of the readiness with which medicines are given and taken by persons equally ignorant of their composition and action: A brother-practitioner prescribed protiodide of mercury for a female patient suffering with headache due to syphilis. Little suspecting the diagnosis that had been made in her case, she returned some weeks later and said to the physician that the little pills were the grandest remedy for headache she had ever taken, and that she had given a copy of the prescription to a number of her friends who suffered with headache.

The habit of using opium and chloral is not infrequently due to indiscriminate refilling of prescriptions for those remedies, so powerful for either good or evil.

Another argument against refilling for others prescriptions written for one person is that such renewals deprive the physician of his just and legitimate fees. Many physicians have been driven to the necessity of dispensing their own medicines in cases of specific urethritis. The writer has known a half dozen or more persons to obtain medicine upon the same prescription in such cases. This is very unjust to the physician. Let it be asked, Who is responsible for this condition of affairs? Clearly it is the fault of the physician, for he has only to indicate that the prescriptions are not to be refilled to have his wish gratified. Some simple phrase, as *Not to be refilled*, written or printed on the prescription, will suffice. In case it is desired that the patient continue the medicine without an order for renewal, simply run the pen through this line.

It is by no means the intention of the writer to indicate that, in chronic cases in which it is desired to continue the remedy for some time, the patient should be required to return for a renewal order each time his prescription is to be refilled. This would be unjust to the patient.

Discretion should be exercised in the quantity of medicine ordered. In acute cases, in which the physician visits the patient every day or two, it is better to order small quantities, as the person would be subjected to a useless expenditure of money if large bottles or packages are ordered of which he would require only a few doses. In chronic cases, in which the physician is to see the patient at longer intervals, sufficient medicine should be ordered to last until the next visit.

Grammatical Construction of Prescriptions.—To write prescriptions correctly some knowledge of the principles of the Latin language is essential. While it is not the purpose of the writer to presume to condense into a few brief pages a compendium of the Latin tongue, yet it will be necessary to consider at some length its etymology and syntax, the former treating of the classification, inflection, and derivation of words, and the latter of the construction of sentences.

There being no *article*, the Latin language has but eight parts of speech—nouns, adjectives, pronouns, verbs, adverbs, prepositions, conjunctions, and interjections. There are three genders, as in English—masculine, feminine, and neuter. Names of inanimate objects, however, are not, as in English, always neuter: they may either be masculine or be feminine; for example, *rubus*, a blackberry, is masculine; *ulmus*, an elm tree, is feminine. Nouns, adjectives, pronouns, and verbs are inflected; that is, their terminations are changed, and the inflection, according to the part of speech concerned, is termed either *declension*, *comparison*, or *conjugation*. Nouns, adjectives, and pronouns are *declined;* adjectives and adverbs are *compared;* and verbs are *conjugated.* Declension is the change of termination that declinable words undergo in forming the different cases and numbers. These terminations are added to what is called the "stem" or root of the words, which is found by dropping the case-ending of the Genitive Singular. This will be explained more fully later.

In Latin there are five declensions, distinguished from one another by the endings of the Genitive Singular. In each declension there are six cases—Nominative, Genitive, Dative, Accusative, Vocative, and Ablative, and two numbers, Singular and Plural. The Nominative case corresponds to the English nominative, the Genitive to the English possessive, and the Accusative to the English objective. Each case has, generally speaking, its own proper ending, except the Nominative and Vocative, which are usually alike. In neuter nouns, however, the Nominative, Accusative, and Vocative are alike. Nouns of the First declension used in prescription-writing end in *a* (except Greek nouns; for example, Aloe). They are declined thus:

	Singular.			*Plural.*	
Nom.	A′qu-a,	Water.	*Nom.*	A′qu-æ,	Waters.
Gen.	A′qu-æ,	Of water.	*Gen.*	Aqu-a′rum,	Of waters.
Dat.	A′qu-æ,	To water.	*Dat.*	A′qu-is,	To waters.
Acc.	A′qu-am,	Water.	*Acc.*	A′qu-as,	Waters.
Voc.	A′qu-a,	O water.	*Voc.*	A′qu-æ,	O waters.
Abl.	A′qu-a,	By or with water.	*Abl.*	A′qu-is,	With waters.

The exception *aloe* is declined as follows:

	Singular.			*Plural.*
Nom.	A′loe.	*Acc.*	A′loen.	Endings the same as those of ***Aqua.***
Gen.	A′loes.	*Voc.*	A′loe.	
Dat.	A′loæ.	*Abl.*	A′loe.	

The following nouns of the first declension are declined like *Aqua:*

Aca′cia.
Aloi′na.
Althæ′a.
Ammo′nia.
Amyg′dala.
Antifebri′na.
Antipyri′na.
Apomorphi′na.
Ar′nica.
Asafœ′tida.
Atropi′na.
Ave′na.
Bac′ca.
Belladon′na.
Berberi′na.
Bergamot′ta.
Bet′ula.
Braye′ra.
Bryo′nia.
Caffei′na.
Calen′dula.
Calum′ba.
Cambo′gia.
Cam′phora.
Cap′sula.
Casca′ra.
Cascaril′la.
Cas′sia.
Casta′nea.
Centifo′lia.
Ce′ra.
Cetra′ria.
Char′ta.
Char′tula.
Chimaph′ila.
Chira′ta.
Cimicif′uga.
Cincho′na.
Cinchonidi′na.
Cinchoni′na.
Co′ca.
Cocai′na.
Codei′na.
Convalla′ria.
Copai′ba.
Cre′ta.
Cube′ba.
Drach′ma.
Dulcama′ra.
Elas′tica.
Ergo′ta.
Fis′tula.
Fluidrach′ma.
Fluidun′cia.
Fran′gula.
Gal′la.
Gaulthe′ria.
Gentia′na.
Glycyrrhi′za.
Grinde′lia.
Guara′na.
Gut′ta.
Gut′ta-per′cha.
Hedeo′ma.
Her′ba.
Hydrasti′na.
Hyosci′na.
Hyoscyami′na.
Ichthyocol′la.
Igna′tia.
In′dica.
In′ula.
Ipecacuan′ha.
Jala′pa.
Kama′la.
Krame′ria.
La′na.
Lage′na.
Lap′pa.
Lavan′dula.
Leptan′dra.
Li′bra.
Lobe′lia.
Magne′sia.
Magno′lia.
Man′na.
Mas′sa.
Mas′ticha.
Matrica′ria.
Medul′la.
Melis′sa.
Men′tha.
Mi′ca.
Mistu′ra.
Morphi′na.
Mor′rhua.

Myr'cia.
Myris'tica.
Myr'rha.
Narcoti'na.
Oleoresi'na.
Oli'va.
Parei'ra.
Physostigmi'na.
Phytolac'ca.
Pilocarpi'na.
Pil'ula.
Pimen'ta.
Piperi'na.
Potas'sa.
Pulsatil'la.
Purshia'na.
Quas'sia.
Quilla'ja.
Quinidi'na.
Quini'na.
Resi'na.
Ro'sa.
Ru'ta.
Sabi'na.
Sal'via.
Sanguina'ria.
Santon'ica.
Sarsaparil'la.
Scat'ula.
Scil'la.
Scutella'ria.
Sen'ega.
Sen'na.
Serpenta'ria.
So'da.
Spartei'na.
Spige'lia.
Staphisa'gria.
Stillin'gia.
Strychni'na.
Tabel'la.
Terebin'thina.
The'ja.
Theobromi'na.
Tinctu'ra.
Tragacan'tha.
Un'cia.
U'va.
Valeria'na.
Vanil'la.
Veratri'na.
Vio'la.
Vom'ica.
Ze'a.

Nouns of the second declension end in *er*, *ir*, *us*, and *os*, masculine, *um* and *on*, neuter. Pharmacopœial nouns of this declension end either in *us* or in *um*. They are thus declined:

Singular.

	Masculine.	*Neuter.*
Nom.	Sy'rŭp-us.	Vi'n-um.
Gen.	Sy'rup-i.	Vi'n-i.
Dat.	Sy'rup-o.	Vi'n-o.
Acc.	Sy'rup-um.	Vi'n-um.
Voc.	Sy'rup-e.	Vi'n-um.
Abl.	Sy'rup-o.	Vi'no.

Plural.

	Masculine.	*Neuter.*
Nom.	Sy′rŭp-i.	Vi′n-a.
Gen.	Sy-rup-o′rum.	Vi-no′rum.
Dat.	Sy′rup-is.	Vi′n-is.
Acc.	Sy′rup-os.	Vi′n-a.
Voc.	Sy′rup-i.	Vi′n-a.
Abl.	Sy′rup-is.	Vi′n-is.

It will be observed that the nominative, accusative, and vocative terminations in neuter nouns are alike. The following nouns are of the Second Declension, and are declined like *Sy′rupus:*

Cal′amus.
Caryophyl′lus.
Chon′drus.
Coc′cus.
Con′gius.
Cro′cus.
Eucalyp′tus.
Euon′ymus.
Fi′cus.
Hu′mulus.
Hyoscy′amus.
Junip′erus.
Mos′chus.
Octa′rius.
Op′ulus (fem.).
Phos′phorus.
Pilocar′pus.
Pi′nus (fem.).
Pru′nus.
Rham′nus.
Rici′nus.
Rosmari′nus.
Ru′bus.
Sambu′cus.
Scopa′rius.
Scru′pulus.
Strophan′thus.
Suc′cus.
Tamarin′dus.
Thy′mus.
Trochis′cus.
Ul′mus.
Ur′sus.
Vitel′lus.

The following nouns are declined like *Vinum:*

Absin′thium.
Acetanili′dum.
Ace′tum.
Ac′idum.
Aconi′tum.
Al′lium.
Aloi′num.
Alumin′ium.
Ammoni′acum.
Ammo′nium.
Am′ylum.
Ani′sum.
Antimo′nium.
Apio′lium.
Apo′cynum.
Argen′tum.
Arse′num.
Aspid′ium.
Auran′tium.
Au′rum.
Bal′samum.
Ba′rium.
Benzi′num.
Benzoi′num.

Berga′mium.
Bismu′thum.
Bisulphi′dum.
Bo′ricum.
Boroglyceri′num.
Bro′midum.
Bro′mum.
Cadi′num.
Cal′cium.
Cap′sicum.
Carbol′icum.
Carbon′icum.
Cardamo′mum.
Ca′rum.
Caulophyl′lum.
Cera′tum.
Ce′rium.
Ceta′ceum.
Chelido′nium.
Chenoidi′num.
Chenopo′dium.
Chlor′idum.
Chlorofor′mum.
Chlo′rum.
Chro′micum.
Chrysarobi′num.
Cinnamo′mum.
Col′chicum.
Collo′dium.
Co′nium.
Corian′drum.
Creoso′tum.
Cu′prum.
Cyan′idum.
Cydo′nium.
Cypripe′dium.
Decoc′tum.
Despuma′tum.
Diox′idum.
Disul′phidum.
Elateri′num.
Emplas′trum.
Emul′sum.
Eupato′rium.
Extrac′tum.
Ferrocyan′idum.
Fer′rum.
Fœnic′ulum.
Fo′lium.
Frumen′tum.
Gal′banum.
Gelse′mium.
Gera′nium.
Glonoi′num.
Glyceri′num.
Glyceri′tum.
Glycyrrhizi′num.
Gossyp′ium.
Grana′tum.
Gra′num.
Guai′acum.
Hæmatox′ylum.
Hydrar′gyrum.
Hydroge′nium.
Illic′ium.
Infu′sum.
Ingluvi′num.
Iod′idum.
Iodofor′mum.
Io′dum.
Lactuca′rium.
Lig′num.
Linimen′tum.
Li′num.
Lith′ium.
Lupuli′num.
Lycopo′dium.
Magne′sium.
Mal′tum.
Man′ganum.
Marru′bium.
Menisper′mum.
Meze′reum.
Min′imum.
Naphtali′num.
Nitro-glyceri′num.
Olea′tum.
O′leum.
O′pium.
Ori′ganum.
O′vum.
Ox′idum.
Oxige′nium.
Pancreati′num.
Paraldehy′dum.
Pepsi′num.
Petrola′tum.
Petro′leum.
Phos′phidum.
Picrotoxi′num.
Piperi′num.
Plum′bum.

Podophyl′lum.
Potas′sium.
Prunifo′lium.
Pru′num.
Pyre′thrum.
Pyroxyli′num.
Resorci′num.
Rhe′um.
Sac′charum.
Salici′num.
San′talum.
Santoni′num.
Scammo′nium.
Ses′amum.
Se′vum.
So′dium.
Stramo′nium.
Stron′tium.
Suc′cinum.
Sul′phidum.
Supposito′rium.
Taba′cum.
Tanace′tum.
Tan′nicum.
Tarax′acum.
Terebe′num.
Tig′lium.
Trit′icum.
Unguen′tum.
Vera′trum.
Vibur′num.
Xanthox′ylum.
Xer′icum.
Zin′cum.

Three pharmacopœial nouns of the second declension end in *on:* Erythrox′ylon,[1] Hæmatox′ylon, and Toxicoden′dron. In the singular they are declined as follows:

Nom.	Erythrox′ylon.
Gen.	Erythrox′yli.
Dat.	Erythrox′ylo.
Acc.	Erythrox′ylon.
Voc.	Erythrox′ylon.
Abl.	Erythrox′ylo.

The case-endings for the plural are like those of *Vinum.*

Nouns of the third declension end in *a, e, i, o, y, c, l, m, r, s, t,* and *x.* The case-endings in this declension are the same for all genders with the exception of the Accusative Neuter Singular and the Nominative, Accusative, and Vocative Neuter Plural. The student, however, often experiences some difficulty in finding the proper root to which the terminations are to be annexed. As heretofore stated, the root is ascertained by dropping the ending of the Genitive Singular.

Since the Genitive Case of nouns of this declension often differs materially from the Nominative, as Nom. *Carbo,* Gen. *Carbonis,* it will be found necessary to learn both cases, which will be given in the table appended. Masculine and feminine nouns are declined like *Æ'ther:*

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[1] Official as Coca.

Singular.		*Plural.*	
Nom.	Æ'ther.	*Nom.*	Æ'ther-es.
Gen.	Æ'ther-is.	*Gen.*	Æ'ther-um.
Dat.	Æ'ther-i.	*Dat.*	Æther'ibus.
Acc.	Æ'ther-em.	*Acc.*	Æ'ther-es.
Voc.	Æ'ther.	*Voc.*	Æ'ther-es.
Abl.	Æ'ther-e.	*Abl.*	Æther'ibus.

Æ'ther is the Nominative, *Æ'theris* is the Genitive. Dropping the termination *is* of the Genitive, we have *Æ'ther,* which is the stem. Adding to the stem the proper termination, we form the required case.

Neuter nouns are similarly declined, except that the Nominative, Accusative, and Vocative are alike.

The following nouns and participles are declined like *Æther:*

Nom.	*Gen.*
Ace'tas,	Aceta'tis.
A'deps,	A'dipis.
Albu'min (neut.),	Albu'minis.
Al'cohol (neut.),	Alcoho'lis.
Alu'men (neut.),	Alu'minis.
An'imal,	Anima'lis.
An'themis,	Anthem'idis.
Ar'senas,	Arsena'tis.
Ar'senis,	Arseni'tis.
Ascle'pias,	Asclepia'dis.
Aspidosper'ma,	Aspidosper'matis.
Ben'zoas,	Benzoa'tis.
Bicar'bonas,	Bicarbona'tis.
Bichro'mas,	Bichroma'tis.
Bisul'phas,	Bisulpha'tis.

Bisul′phis,	Bisulphi′tis.
Bitar′tras,	Bitartra′tis.
Bo′ras,	Bora′tis.
Bos,	Bo′vis.
Bul′liens,	Bullien′tis.
Calx,	Cal′cis.
Can′nabis,	Can′nabis.
Can′tharis,	Canthar′idis.
Car′bo,	Carbo′nis.
Car′bonas,	Carbona′tis.
Chlo′ral (neut.),	Chlora′lis.
Ci′tras,	Citra′tis.
Colocyn′this,	Colocyn′thidis.
Confec′tio,	Confectio′nis.
Cor′tex,	Cor′ticis.
Digita′lis,	Digita′lis.
Efferves′cens,	Effervescen′tis.
Elix′ir,	Elix′iris.
Emul′sio,	Emulsio′nis.
Erig′eron,	Erigeron′tis.
Fel (neut.),	Fel′lis.
Fer′vens,	Ferven′tis.
Flos,	Flo′ris.
Hamame′lis,	Hamamel′idis.
Hiru′do,	Hiru′dinis.
Hy′dras,	Hydra′tis.
Hydras′tis,	Hydras′tis.
Hydrobro′mas,	Hydrobroma′tis.
Hydrochlo′ras,	Hydrochlora′tis.
Hypophos′phis,	Hypophosphi′tis.
Hyposul′phis,	Hyposulphi′tis.
Iris,	I′ridis.
Ju′glans,	Juglan′dis.
Lac (neut.),	Lac′tis.

Lac'tas,	Lacta'tis.
Lactophos'phas,	Lactophospha'tis.
Li'mon,	Limo'nis.
Li'quor,	Liquo'ris.
Lo'tio,	Lotio'nis.
Ma'cis,	Ma'cidis.
Mel (neut.),	Mel'lis.
Mucila'go,	Mucilag'inis.
Ni'tras,	Nitra'tis.
Ni'tris,	Nitri'tis.
Nux,	Nu'cis.
Ox'alas,	Oxala'tis.
Pa'nis,	Pa'nis.
Pars,	Par'tis.
Pe'po,	Pepo'nis.
Perman'ganas,	Permangana'tis.
Phos'phas,	Phospha'tis.
Physostig'ma (neut.),	Physostig'matis.
Pi'per (neut.),	Pi'peris.
Pix,	Pi'cis.
Pul'vis,	Pul'veris.
Pyrophos'phas,	Pyrophospha'tis.
Ra'dix,	Radi'cis.
Rhus,	Rhois (or) Ro'ris.
Ru'mex,	Ru'micis.
Salic'ylas,	Salicyla'tis.
Sa'lix,	Sa'licis.
Santoni'nas,	Santonina'tis.
Sa'po,	Sapo'nis.
Se'men (neut.),	Sem'inis.
Sil'icas,	Silica'tis.
Sina'pis,	Sina'pis.
Sty'rax,	Styra'cis.
Subace'tas,	Subaceta'tis.

Subcarbo′nas,	Subcarbona′tis.
Subni′tras,	Subnitra′tis.
Subsul′phas,	Subsulpha′tis.
Sul′phas,	Sulpha′tis.
Sul′phis,	Sulphi′tis.
Sulphocar′bolas,	Sulphocarbola′tis.
Sul′phur (neut.),	Sul′phuris.
Sum′bul,	Sumbu′lis.
Tar′tras,	Tartra′tis.
Tersul′phas,	Tersulpha′tis.
Theobro′ma,	Theobro′matis.
Tritura′tio,	Trituratio′nis.
Valeria′nas,	Valeriana′tis.
Zin′giber (neut.),	Zingib′eris.

Nouns of the Fourth Declension end in *us*, masculine (except *Ficus*, a fig, feminine), and in *u*, neuter. Masculine nouns are declined like *Spirit′us:*

	Singular.		*Plural.*
Nom.	Spir′itus.	*Nom.*	Spir′it-us.
Gen.	Spir′itus.	*Gen.*	Spirit′uum.
Dat.	Spirit′ui.	*Dat.*	Spirit′ibus.
Acc.	Spir′itum.	*Acc.*	Spir′it-us.
Voc.	Spir′itus.	*Voc.*	Spir′it-us.
Abl.	Spir′itu.	*Abl.*	Spirit′ibus.

Nouns of the Fifth Declension end in *es*, and are feminine. They are thus declined:

	Singular.		*Plural.*
Nom.	Res, a thing.	*Nom.*	Res.
Gen.	Re′i.	*Gen.*	Re′rum.
Dat.	Re′i.	*Dat.*	Re′bus.
Acc.	Rem.	*Acc.*	Res.
Voc.	Res.	*Voc.*	Res.
Abl.	Re.	*Abl.*	Re′bus.

The following nouns are considered indeclinable:

Am′yl.
Azed′arach.
Bu′chu.
Caj′uput.
Cat′echu.
Co′ca.
Cus′so.
Eriodic′tyon.
Eucalyp′tol.
Diach′ylon.
Hydronaph′thol.
Ki′no.
Mat′ico.
Men′thol.
Me′thyl.
Naph′tol.
Phe′nol.
Py′rogallol.
Quebra′cho.
Sa′lol.
Sas′safras.
Thy′mol,
Ure′thran.

Adjectives agree with the nouns which they qualify in gender, number, and case; for example, *extractum fluidum*, a fluid extract. *Extractum* is a neuter noun of the second declension, nominative case, singular number, and *fluidum* is the nominative, singular, neuter, of the adjective *fluidus*, agreeing with *extractum*. Adjectives are declined like nouns, and are either of the first and second declension or of the third. The masculine of adjectives of the first and second declensions ends in *us* or *er*, the feminine in *a*, the neuter in *um*. The masculine is declined like *Syrupus*, the feminine like *Aqua*, the neuter like *Vinum*.

Singular.

Albus, White.

	Masculine.	*Feminine.*	*Neuter.*
Nom.	Al′bus,	Al′ba,	Al′bum.
Gen.	Al′bi,	Al′bæ,	Al′bi.
Dat.	Al′bo,	Al′bæ,	Al′bo.
Acc.	Al′bum,	Al′bam,	Al′bum.
Voc.	Al′be,	Al′ba,	Al′bum.
Abl.	Al′bo,	Al′ba,	Al′bo.
		Plural.	
Nom.	Al′bi,	Al′bæ,	Al′ba.
Gen.	Albo′rum.	Alba′rum,	Albo′rum.
Dat.	Al′bis,	Al′bis,	Al′bis.
Acc.	Al′bos,	Al′bas,	Al′ba.
Voc.	Al′bi,	Al′bæ,	Al′ba.
Abl.	Al′bis,	Al′bis,	Al′bis.

The following adjectives and participles are declined like *Al′bus:*

Absolu′tus.
Abstrac′tus.
Acet′icus.
Æther′eus.
Alcohol′icus.
Amā′rus.
American′us.
Ammonia′tus.
Aromat′icus.
Arseno′sus.
Benzo′icus.
Benzoina′tus.
Bor′icus.
Burgun′dicus.
Camphora′tus.
Cantharida′tus.
Carbol′icus.
Cathart′icus.
Chlora′tus.
Chrom′icus.
Citra′tus.
Cit′ricus.
Compos′itus.
Corrosi′vus.
Cru′dus.
Deodora′tus.
Despuma′tus.
Destilla′tus or Distilla′tus.
Dilu′tus.
Dimi′dius.
Expres′sus.
Exsic′catus.
Extrac′tus.
Fla′vus.
Fu′sus.
Gal′licus.
Gla′b-er, -ra, -rum.
Granula′tus.
Hydra′tus.
Hydriod′icus.
Hydrobrom′icus.
Hydrochlor′icus.
Hydrocyan′icus.
Hydro′sus.
Hypophosphoro′sus.
Idæ′us.
Infu′sus.
Inspissa′tus.
Ioda′tus.
Lac′ticus.
La′tus.
Liq′uidus.
Mari′nus.
Monobroma′tus.
Ni′g-er, -ra, -rum.
Nit′ricus.
Ni′tro-hydrochloricus.
Odora′tus.
Ole′icus.
Oxida′tus.
Peruvia′nus.
Phosphora′tus.
Phosphor′icus.
Piperi′tus.
Pondero′sus.
Præcipita′tus.
Præpara′tus.
Purifica′tus.
Pu′rus.
Quan′tus.
Rectifica′tus.
Reduc′tus.
Ru′b-er, -ra, -rum.
Sacchara′tus.
Saigon′icus.
Salicyl′icus.
Spis′sus.
Stypt′icus.
Sublima′tus.
Sulphura′tus.
Sulphur′icus.
Sulphuro′sus.
Tan′nicus.
Tartar′icus.
Toluta′nus.
Virginia′nus.
Zeylan′icus.

Adjectives of the third declension may have one, two, or three terminations in the nominative singular. Those with one and three terminations need not concern us. Adjectives of two terminations end in *is* for the masculine and feminine, and *e* for the neuter.

	Singular.		*Plural.*	
	Masc. and Fem.	*Neuter.*	*Masc. and Fem.*	*Neuter.*
Nom.	Mi′tis (mild),	mi′te.	Mi′tes,	mi′tia.
Gen.	Mi′tis,	mi′tis.	Mi′tium,	mi′tium.
Dat.	Mi′ti,	mi′ti.	Mi′tibus,	mi′tibus.
Acc.	Mi′tem,	mi′te.	Mi′tes,	mi′tia.
Voc.	Mi′tis,	mi′te.	Mi′tes,	mi′tia.
Abl.	Mi′ti,	mi′ti.	Mi′tibus,	mi′tibus.

The following are declined like *Mitis:*

Æqua′lis.
Anima′lis.
Antimonia′lis.
Barbaden′sis.
Canaden′sis.
Commu′nis.
Dul′cis.
Flex′ilis.
Fluvia′tilis.
For′tis.
Glacia′lis.
Mol′lis.
Niva′lis.
Pluvia′lis.
Semis′sis.
Solu′bilis.
Vena′lis.
Vir′idis.
Volat′ilis.
Vegeta′bilis.

NUMERAL ADJECTIVES AND ADVERBS.

Cardinals.	*Ordinals.*	*Numeral Adverbs.*
Unus, Una, Unum, *One.*	Pri′mus, a, um, *First.*	Se′mel, *Once.*
Duo, Duæ, Duo, *Two.*	Secun′dus, a, um, *Second.*	Bis, *Twice.*
Tres, Tria, *Three.*	Ter′tius, a, um, *Third.*	Ter, *Three times.*
Quat′tuor, *Four.*	Quar′tus, a, um, *Fourth.*	Qua′ter, *Four times.*
Quin′que, *Five.*	Quin′tus, a, um, *Fifth.*	Quin′quies, *Five times.*
Sex, *Six.*	Sex′tus, a, um, *Sixth.*	Sex′ies, *Six times.*
Sep′tem, *Seven.*	Sep′timus, a, um, *Seventh.*	Sep′ties, *Seven times.*
Oc′to, *Eight.*	Octa′vus, a, um, *Eighth.*	Oc′ties, *Eight times.*
No′vem, *Nine.*	No′nus, a, um, *Ninth.*	No′vies, *Nine times.*
De′cem, *Ten.*	Dec′imus, a, um, *Tenth.*	De′cies, *Ten times.*
Vigin′ti, *Twenty.*	Vices′imus, *Twentieth.*	Vi′cies, *Twenty times.*
Trigin′ta, *Thirty.*	Trices′imus, *Thirtieth.*	Tri′cies, *Thirty times.*
Quadragin′ta, *Forty.*	Quadrages′imus, *Fortieth.*	Quadra′gies, *Forty times.*
Quinquagin′ta, *Fifty.*	Quinquages′imus, *Fiftieth.*	Quinqua′gies, *Fifty times.*
Sexagin′ta, *Sixty.*	Sexages′imus, *Sixtieth.*	Sexa′gies, *Sixty times.*
Septuagin′ta, *Seventy.*	Septuages′imus,*Seventieth.*	Septua′gies, *Seventy times.*
Octogin′ta, *Eighty.*	Octoges′imus, *Eightieth.*	Octo′gies, *Eighty times.*
Nonagin′ta, *Ninety.*	Nonages′imus, *Ninetieth.*	Nona′gies, *Ninety times.*
Cen′tum, *One hundred.*	Centes′imus,*One hund′th.*	Cen′ties, *One hun′d times.*

The cardinals U′nus, Du′o, and Tres are declined as follows:

Singular.

Nom.	U′nus,	u′na,	u′num.
Gen.	Uni′us,	uni′us,	uni′us.
Dat.	U′ni,	u′ni,	u′ni.
Acc.	U′num,	u′nam,	u′num.
Voc.	U′ne,	u′na,	u′num.
Abl.	U′no,	u′na,	u′no.

Plural.

Nom.	U′ni,	u′næ,	u′na.
Gen.	Uno′rum,	una′rum,	uno′rum.
Dat.	U′nis,	u′nis,	u′nis.
Acc:	U′nos,	u′nas,	u′na.
Voc.	U′ni,	u′næ,	u′na.
Abl.	U′nis,	u′nis,	u′nis.

Plural.

Nom.	Du′o,	du′æ,	du′a.
Gen.	Duo′rum,	dua′rum,	duo′rum.
Dat.	Duo′bus,	dua′bus,	duo′bus.
Acc.	Du′os,	du′as,	du′a.
Voc.	Du′o,	du′æ,	du′a.
Abl.	Duo′bus,	dua′bus,	duo′bus.

Tres, *Three.*

	Masc. and Fem.	*Neuter.*
Nom.	Tres,	Tri′a.
Gen.	Tri′um,	Tri′um.
Dat.	Tri′bus,	Tri′bus.
Acc.	Tres,	Tri′a.
Voc.	Tres,	Tri′a.
Abl.	Tri′bus,	Tri′bus.

A *verb* is a word by which something is affirmed of a person or a thing (for example, *Fiat mistura,* let a mixture be made). Verbs are either *active* or *neuter.* An active verb requires an object to complete its sense, as *Recipe fluidunciam aquæ,* take an ounce of water. A neuter verb expresses such an action or state as does not require an object to complete its sense—for example, *Aqua fervet,* the water boils. Regular verbs are inflected or conjugated in four different ways, and are accordingly divided into four conjugations, distinguished from one another by the endings of the Infinitive mood. Verbs belonging to the

First Conjugation end in *āre.*
Second Conjugation end in *ēre.*
Third Conjugation end in *ĕre.*
Fourth Conjugation end in *īre.*

Most transitive verbs have two forms, or voices, Active and Passive; for example, Do, *I give,* active, Dar, *I am given,* passive. In the active voice the verb represents the subject as acting; for example, Do medicinam, *I administer medicine.* A verb in the passive voice represents the subject as acted upon; for example, Medicina mihi datur, *medicine is given to me.* The appended list contains most of the verbs employed in prescription-writing:

First Conjugation, Active Voice.

Pres. Indicative.	*Pres. Infinitive.*	*Pres. Subjunctive.*	*Imperative.*
Do, *I give.*	Da′re, *To give.*	Dat, *let (him) give.*	Da, *give.*
Co′lo, *I strain.*	Cola′re, *to strain.*	Co′let, *let (him) strain.*	Co′la, *strain.*
Adminis′tro, *I administer.*	Administra′re, *to administer.*	Admin′istret, *let (him) administer.*	Adminis′tra, *administer.*
Ag′ito, *I shake.*	Agita′re, *to shake.*	Ag′itet, *let (him) shake.*	Ag′ita, *shake.*
Ap′plico, *I apply.*	Applica′re.	Ap′plicet.	Ap′plica.
Contin′uo, *I continue.*	Continua′re.	Contin′uet.	Contin′ua.

Pres. Indicative.	*Pres. Infinitive.*	*Pres. Subjunctive.*	*Imperative.*
Evap′oro, *I evaporate.*	Evapora′re.	Evap′oret.	Evap′ora.
Inha′lo, *I inhale.*	Inhala′re.	In′halet.	Inha′la.
Ma′cero, *I macerate.*	Macera′re.	Ma′ceret.	Ma′cera.
Mandu′co, *I chew.*	Manduca′re.	Mandu′cet.	Mandu′ca.
Pa′ro, *I prepare.*	Para′re.	Pa′ret.	Pa′ra.
Per′sto, *I persevere.*	Persta′re.	Per′stet.	Per′sta.
Po′to, *I drink.*	Pota′re.	Po′tet.	Po′ta.
Præ′paro, *I prepare.*	Præpara′re.	Præ′paret.	Præ′para.
Pul′vero, *I pulverize.*	Pulvera′re.	Pul′veret.	Pul′vera.
Pur′go, *I purge.*	Pur′gare.	Pur′get.	Pur′ga.
Re′novo, *I renew.*	Renova′re.	Re′novet.	Re′nova.
Ser′vo, *I keep.*	Ser′vare.	Ser′vet.	Ser′va.
Sig′no, *I mark.*	Sig′nare.	Sig′net.	Sig′na.
Sto, *I stand.*	Sta′re.	Stet.	Sta.
Usur′po, *I use.*	Usurp′are.	Usur′pet.	Usur′pa.

First Conjugation, Passive Voice.

Pres. Infinitive.	*Pres. Subjunctive.*	*Past Participle.*	*Gerundive.*
Da′ri, *to be given.*	De′tur, *let (him) be given.*	Da′tus, *given.*	Dan′dus, *to be given.*
Cola′ri, *to be strained.*	Cole′tur, *let it be strained.*	Cola′tus.	Colan′dus.
Administra′ri, *to be administered.*	Administre′tur, *let it be administered.*	Administra′tus.	Administran′dus.
Agita′ri, *to be shaken*	Agite′tur.	Agita′tus.	Agitan′dus.
Applica′ri, *to be applied.*	Applice′tur.	Applica′tus.	Applican′dus.
Continua′ri, *to be continued.*	Continue′tur.	Continua′tus.	Continuan′dus.
Evapora′ri, *to be evaporated.*	Evapore′tur.	Evapora′tus.	Evaporan′dus.
Explora′ri, *to be explored.*	Explore′tur.	Explora′tus.	Exploran′dus.
Inhala′ri, *to be inhaled.*	Inhale′tur.	Inhala′tus.	Inhalan′dus.
Macera′ri, *to be macerated.*	Macere′tur.	Macera′tus.	Maceran′dus.

Pres. Infinitive.	*Pres. Subjunctive.*	*Past Participle.*	*Gerundive.*
Manduca′ri, *to be chewed.*	Manduce′tur.	Manduca′tus.	Manducan′dus.
Para′ri, *to be pre*pared.	Pare′tur.	Para′tus.	Paran′dus.
Pota′ri, *to be drunk.*	Pote′tur.	Pota′tus.	Potan′dus.
Præpara′ri, *to be prepared.*	Præpare′tur.	Præpara′tus.	Præparan′dus.
Pulvera′ri, *to be pulverized.*	Pulvere′tur.	Pulvera′tus.	Pulveran′dus.
Purga′ri, *to be purged.*	Purge′tur.	Purga′tus.	Purgan′dus.
Renova′ri, *to be renewed.*	Renove′tur.	Renova′tus.	Renovan′dus.
Serva′ri, *to be preserved.*	Serve′tur.	Serva′tus.	Servan′dus.
Signa′ri, *to be marked.*	Signe′tur.	Signa′tus.	Signan′dus.
Usurpa′ri, *to be used.*	Usurpe′tur.	Usurpa′tus.	Usurpan′dus.

Second Conjugation, Active Voice.

Pres. Indicative.	*Pres. Infinitive.*	*Pres. Subjunctive.*	*Imperative.*
Admo′veo, *I apply.*	Admove′re, *to apply.*	Admo′veat, *let (him) apply.*	Ad′move, *apply.*
Adhib′eo, *I give.*	Adhibe′re.	Adhib′eat.	Ad′hibe.
Admis′ceo, *I mix with.*	Admisce′re.	Admis′ceat.	Ad′misce.
Au′geo, *I increase.*	Auge′re.	Au′geat.	Au′ge.
Ca′veo, *I shun.*	Cave′re.	Ca′veat.	Ca′ve.
Ci′eo, *I excite.*	Cie′re.	Ci′eat.	Ci′e.
Commis′ceo, *I mix together.*	Commisce′re.	Commis′ceat.	Com′misce.
Exhib′eo, *I administer.*	Exhibe′re.	Exhib′eat.	Ex′hibe.
Fo′veo, *I foment.*	Fove′re.	Fo′veat.	Fo′ve.
Mis′ceo, *I mix.*	Misce′re.	Mis′ceat.	Mis′ce.
Mo′veo, *I move.*	Move′re.	Mo′veat.	Mo′ve.
Permis′ceo, *I mix through.*	Permisce′re.	Permis′ceat.	Per′misce.
Promo′veo, *I promote.*	Promove′re.	Promo′veat.	Pro′move.
Respond′eo, *I answer.*	Responde′re.	Respon′deat.	Respon′de.

Second Conjugation, Passive Voice.

Pres. Infinitive.	*Pres. Subjunctive.*	*Past Participle.*	*Gerundive.*
Admove'ri, *to be applied.*	Admovea'tur, *let it be applied.*	Admo'tus, *applied.*	Admoven'dus, *to be applied.*
Adhibe'ri, *to be applied.*	Adhibea'tur.	Adhib'itus.	Adhiben'dus.
Admisce'ri, *to be mixed with.*	Admiscea'tur.	Admix'tus.	Admiscen'dus.
Auge'ri, *to be increased.* [*ed.*	Augea'tur.	Auc'tus.	Augen'dus.
Cave'ri, *to be avoid-*	Cavea'tur.	Cau'tus.	Caven'dus.
Cie'ri, *to be excited.*	Ciea'tur.	Ci'tus.	Cien'dus.
Commisce'ri, *to be mixed with.*	Commiscea'tur.	Commix'tus.	Commiscen'dus.
Exhibe'ri, *to be administered.*	Exhibea'tur.	Exhib'itus.	Exhiben'dus.
Fove'ri, *to be fomented.*	Fovea'tur.	Fo'tus.	Foven'dus.
Misce'ri, *to be mixed*	Miscea'tur.	Mix'tus.	Miscen'dus.
Move'ri, *to be moved*	Movea'tur.	Mo'tus.	Moven'dus.
Permisce'ri, *to be mixed thoroughly.*	Permiscea'tur.	Permix'tus.	Permiscen'dus.
Promove'ri, *to be promoted.*	Promovea'tur.	Promo'tus.	Promoven'dus.

Third Conjugation, Active Voice.

Pres. Indicative.	*Pres. Infinitive.*	*Pres. Subjunctive.*	*Imperative.*
Adji'cio, *I add to.*	Adji'cĕre, *to add to.*	Adji'ceat, *let* (*him*) *add to.*	Ad'jice, *add.*
Ad'do, *I add.*	Ad'dere, *to add.*	Ad'dat, *let* (*him*) *add.*	Ad'de, *add.*
Appo'no, *I apply.*	Appo'nere, *to apply.*	Appo'nat, *let* (*him*) *apply.*	Appo'ne, *apply.*
Bi'bo, *I drink.*	Bi'bere, *to drink.*	Bi'bat, *let* (*him*) *drink.*	Bi'be, *drink.*
Ca'pio, *I take.*	Ca'pere.	Ca'piat.	Ca'pe.
Col'luo, *I wash.*	Collu'ere.	Col'luat.	Col'lue.
Conci'do, *I slice.*	Conci'dere.	Con'cidat.	Con'cide.
Concu'tio, *I shake.*	Concu'tere.	Concu'tiat.	Con'cute.
Confi'cio, *I make up.*	Confi'cere.	Confi'ciat.	Con'fice.
Con'tero, *I rub together.*	Conte'rere.	Con'terat.	Con'tere.

Pres. Indicative.	*Pres. Infinitive.*	*Pres. Subjunctive.*	*Imperative.*
Contun′do, *I bruise.*	Contun′dere.	Contun′dat.	Con′tunde.
Co′quo, *I boil.*	Co′quere.	Co′quat.	Co′que.
Deco′quo, *I boil down.*	Deco′quere.	Deco′quat.	De′coque.
Di′gero, *I digest.*	Dige′rere.	Di′gerat.	Di′gere.
Di′vido, *I divide.*	Divi′dere.	Di′vidat.	Di′vide.
Ex′primo, *I press out.*	Expri′mere.	Ex′primat.	Ex′prime.
Ex′traho, *I extract.*	Extra′here.	Ex′trahat.	Ex′trahe.
Fa′cio, *I make.*	Fa′cere.	Fa′ciat.	Fac.
Fun′do, *I pour.*	Fun′dere.	Fun′dat.	Fun′de.
Man′do, *I chew.*	Man′dere.	Man′dat.	Man′de.
Mit′to, *I send.*	Mit′tere.	Mit′tat.	Mit′te.
Po′no, *I place.*	Po′nere.	Po′nat.	Po′ne.
Præscri′bo, *I prescribe.*	Præscri′bere.	Præscri′bat.	Præscri′be.
Ra′do, *I scrape.*	Ra′dere.	Ra′dat.	Ra′de.
Recip′io, *I receive.*	Reci′pere.	Rec′ipiat.	Rec′ipe.
Re′digo, *I reduce.*	Redi′gere.	Red′igat.	Red′ige.
Re′peto, *I repeat.*	Repe′tere.	Rep′etat.	Re′pete.
Sol′vo, *I dissolve.*	Sol′vere.	Sol′vat.	Solve′.
Su′mo, *I take.*	Su′mere.	Su′mat.	Su′me.
Te′ro, *I grind.*	Te′rere.	Te′rat.	Te′re.
U′ro, *I burn.*	U′rere.	U′rat.	U′re.
Vo′mo, *I vomit.*	Vo′mere.	Vo′mat.	Vo′me.

Third Conjugation, Passive Voice.

Pres. Infinitive.	*Pres. Subjunctive.*	*Past Participle.*	*Gerundive.*
Ad′jici, *to be added.*	Adjicea′tur, *let* (*it*) *be added.*	Adjec′tus, *added.*	Adjicien′dus, *to be added.*
Ad′di, *to be added.*	Adda′tur.	Ad′ditus.	Adden′dus.
Appo′ni, *to be applied.*	Appona′tur.	Appos′itus.	Apponen′dus.
Bi′bi, *to be drunk.*	Biba′tur.	Bib′itus.	Biben′dus.
Ca′pi, *to be taken.*	Capia′tur.	Cap′tus.	Capien′dus.
Col′lui, *to be washed.*	Collua′tur.	Col′lutus.	Colluen′dus.
Conci′di, *to be sliced.*	Concida′tur.	Conci′sus.	Conciden′dus.
Con′cuti, *to be shaken.*	Concutia′tur.	Concus′sus.	Concutien′dus.
Con′fici, *to be made* [*up.*	Conficia′tur.	Confec′tus.	Conficien′dus.

Pres. Infinitive.	*Pres. Subjunctive.*	*Past Participle.*	*Gerundive.*
Con′teri, *to be rubbed together.*	Contera′tur.	Contri′tus.	Conteren′dus.
Contun′di, *to be bruised.*	Contunda′tur.	Contus′us.	Contunden′dus.
Co′qui, *to be boiled.*	Coqua′tur.	Coc′tus.	Coquen′dus.
Deco′qui, *to be boiled down.*	Decoqua′tur.	Decoc′tus.	Decoquen′dus.
Di′geri, *to be digested.*	Digera′tur.	Diges′tus.	Digeren′dus.
Di′vidi, *to be divided*	Divida′tur.	Divis′us.	Dividen′dus.
Ex′primi, *to be pressed out.*	Exprima′tur.	Expres′sus.	Exprimen′dus.
Ex′trahi, *to be extracted.*	Extraha′tur.	Extrac′tus.	Extrahen′dus.
Fi′eri, *to be made.*	Fi′at.	Fac′tus.	Facien′dus.
Fun′di, *to be poured.*	Funda′tur.	Fu′sus.	Funden′dus.
Man′di, *to be chewed*	Manda′tur.	Man′sus.	Manden′dus.
Mit′ti, *to be sent.*	Mitta′tur.	Mis′sus.	Mitten′dus.
Po′ni, *to be placed.*	Pona′tur.	Pos′itus.	Ponen′dus.
Præscri′bi, *to be prescribed.*	Præscriba′tur.	Præscrip′tus.	Præscriben′dus.
Ra′di, *to be scraped.*	Rada′tur.	Ra′sus.	Raden′dus.
Re′cipi, *to be received.*	Recipia′tur.	Recep′tus.	Recipien′dus.
Re′digi, *to be reduced.*	Rediga′tur.	Redac′tus.	Redigen′dus.
Re′peti, *to be repeated.*	Repeta′tur.	Repeti′tus.	Repeten′dus.
Sol′vi, *to be dissolved*	Solva′tur.	Solu′tus.	Solven′dus.
Su′mi, *to be taken.*	Suma′tur.	Sump′tus.	Sumen′dus.
Te′ri, *to be ground.*	Tera′tur.	Tri′tus.	Teren′dus.
U′ri, *to be burnt.*	Ura′tur.	Us′tus.	Uren′dus.
Vo′mi, *to be vomited.*	Voma′tur.	Vom′itus.	Vomen′dus.

Fourth Conjugation, Active Voice.

Pres. Indicative.	*Pres. Infinitive.*	*Pres. Subjunctive.*	*Imperative.*
Deglu′tio, *I swallow.*	Degluti′re, *to swallow.*	Deglu′tiat, *let* (*him*) *swallow.*	Deglu′ti, *swallow.*
Dor′mio, *I sleep.*	Dormi′re, *to sleep.*	Dor′miat, *let* (*him*) *sleep.*	Dor′mi, sleep.
Hau′rio, *I drink.*	Hauri′re.	Hau′riat.	Hau′ri.
Par′tio, *I divide.*	Parti′re.	Par′tiat.	Par′ti.

Fourth Conjugation. Passive Voice.

Pres. Infinitive.	Pres. Subjunctive.	Perf. Participle.	Gerundive.
[illegible]'ri, to be [illegible]	[illegible]a'tur, let it be [illegible]	[illegible]'tus, [illegible]	[illegible]en'dus, to be [illegible]
Hau'ri, to be drunk	Hauria'tur, let it be drunk	Haus'tus, drawn	Hauren'dus, to be drawn.
Par'ri, to be divided	Partia'tur.	Parti'tus.	Partien'dus.

A *participle* is a word derived from a verb, partaking of its meaning, but having the form of an adjective of the first and second declension, and it has both numbers (see *Album*). While a physician need not be familiar with verbal terminations other than those above mentioned, he should have a thorough knowledge and understanding of the terminations of nouns and of the roots or stems to which these endings are added. A knowledge of the root or stem, while not indispensable, is helpful in abbreviating correctly. Whenever names or terms are not written out in full, a sufficient number of syllables should be given to indicate to a certainty the word abbreviated, so as to avoid mistakes; for example, Hydr. Chlor., which may stand for Hydras Chloralis (Hydrate of Chloral) or Hydrargyri Chloridum (Chloride of Mercury), two widely different substances. A distinctive abbreviation would be Chloral Hydrat. or Hydrarg. Chlorid. Mit.

Prepositions are parts of speech that show the relations of objects to each other. They are so called because they are generally placed before the word whose relation they express. Nouns governed by the following prepositions should be put in the Accusative case:

Ad, *to* (or) *at.*	An'te, *before.*	Con'tra, *against.*
In, *into.*	In'fra, *below.*	In'tra, *within.*
Ob, *on account of.*	Per, *through.*	Post, *after.*
Præ'ter, *beyond.*	Secun'dum, *according to.*	Sub, *near.*
Su'per, *on* (or) *upon.*		

Prepositions governing the ablative:

A,[1] ab, abs, *from, by.*

Cum, *with* (Hydrarg. cum cre'ta, *mercury with chalk*).

De, *from.*

E,[2] or ex, *out, from, out of.*

In signifies *in* or *on.*

Pro, *according to* (Pro re na'ta, *according to circumstances*).

Sub, *under, beneath.*

Si'ne, *without* (Si'ne cor'de, *without a heart*).

Conjunctions are mere connectives; for example, liquor ferri *et* ammonii acetatis—Solution of iron and ammonium acetate. Those commonly used are:

Et, ac, atque, *and.*
Etiam, *also.*
Aut, vel, *or.*
Aut-aut, vel-vel, *either, or.*
Sed, au'tem, *but.*
Er'go, *therefore.*
Nam, *for.*

A prescription begins with the familiar character or symbol, ℞, which stands for *Recipe*, the second person singular of the imperative present of the active transitive verb *Recipio*, and signifies "Take thou." In Latin, as in English, active transitive verbs have an object upon which their action is exerted. In English the noun upon which the action is exerted is said to be in the objective case; in Latin, in the accusative case. Therefore, whatever the pharmacist is directed to take, be it drop, minim, scruple, drachm, ounce, pound, or any other quantity, if it be written out in full, should be put in the accusative case, as the object of the verb *Recipe.* Thus:

Take two ounces of Magnesium Sulphate.

℞. Magne'sii Sulpha'tis, un'cias duas.

Uncias duas is in the accusative case, the object of *Recipe.*

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[1] *A* is used only before consonants, *Ab* before vowels.

[2] *E* is prefixed only to consonants, *Ex* to both vowels and consonants.

Symbols and abbreviated terms, however, are almost invariably used to express quantity, so that the above is usually written:

℞. Mag'nesii Sulpha'tis, ℥ij.

The ingredients of which a prescription consists are invariably to be put in the Genitive case whenever the quantity is expressed. For example:

Take of Elaterin, four grains;
of Alcohol, four fluidounces.
Mix.

℞. Elateri'ni, gr. iv;
Alcohol'is, f℥iv.—Misce.

Elaterini and Alcoholis, the ingredients of the prescription, are in the Genitive case, termed the "Partitive Genitive," because it designates the whole, of which a part is taken. Whenever the noun of weight or capacity is omitted, as in prescribing official pills, tablets, etc., the medicine called for becomes the object of the verb *Recipe*, and, instead of in the Genitive, it must be put in the Accusative case. For example:

Take twelve Vegetable Cathartic Pills.

℞. Pil'ulas Cathar'ticas Vegeta'biles, xij.
Sig.

A noun qualifying the meaning of another noun is put in the Genitive case. Thus, in compound nouns—as, for example, Extract of Licorice, Extractum Glycyrrhizæ—we have a noun in the nominative, Extractum, joined with one in the Genitive, Glycyrrhizæ, the latter qualifying the former. In writing prescriptions the qualifying noun, which, as has just been observed, is in the Genitive, remains unaltered, while the other term is changed according to the rules governing it; for example:

Take of Extract of Licorice, one ounce.
℞. Extracti Glycyrrhizæ, unciam unam.

Here the qualifying noun, Glycyrrhizæ, is not changed, but in place of the nominative Extractum we use the "Partitive Genitive" Extracti, which is governed by unciam. Take *one ounce of Extract.*

Again,

Take of Fluid Extract of Rhamnus Purshiana, one ounce.
℞. Extracti Rhamni Purshianæ Fluidi, fluidunciam unam.

Extracti is the Partitive Genitive signifying "of the extract;" Fluidi is an adjective qualifying Extracti, and agrees with it in gender, number, and case; Rhamni Purshianæ are qualifying nouns which remain unchanged.

The following is the official prescription or formula (approximately) for the Liquor Ferri et Ammonii Acetatis of the United States Pharmacopœia (Solution of Iron and Ammonium Acetate, commonly known as Basham's Mixture):

Tincture of ferric chloride,	five and one-half fluidrachms.
Diluted acetic acid,	one ounce.
Solution of ammonium acetate,	six fluidounces and six fluidrachms.
Aromatic elixir,	three and one-half fluidounces.
Glycerin,	four fluidounces.
Water,	sufficient quantity to make thirty-four fluidounces.

Tincture of Ferric Chloride in Latin is Tinctura Ferri Chloridi, but since the quantity, five and one-half fluidounces, is expressed, Tinctura must be put in the Genitive case. Take of Tincture of the Chloride of Iron, five and one-half ounces, translated, would read: Recipe. Tincturæ

Ferri Chloridi, fluiduncias quinque cum semisse, vel f℥vss. Ferri Chloridi are already in the Genitive, signifying *of* Chloride of Iron, and undergo no change.

Diluted Acetic Acid, one ounce, becomes Acidum Aceticum Dilutum, but the quantity is again expressed, and we use the Genitive; thus, Acidi Acetici Diluti, unciam unam, vel f℥j. Acidi is in the Genitive case, governed by unciam, an ounce, *of* acid. Acetici and Diluti are adjectives agreeing with Acidi in gender, number, and case.

Solution of Ammonium Acetate is Liquor Ammonii Acetatis. Using the Genitive, we have Liquoris Ammonii Acetatis, fluiduncias sex et fluidrachmas sex, vel f℥vj, fʒvj. Ammonii Acetatis does not change.

Aromatic Elixir is Elixir Aromaticus. Put in the Genitive, it would be Elixiris Aromatici. Elixir is a noun of the third declension, and Aromaticus an adjective declined like *albus*, and agreeing with Elixir in gender, number, and case.

Elixiris Aromatici, fluiduncias tres cum semisse, vel f℥iiiss.

Glycerin is Glycerinum in Latin, genitive Glycerini,

Glycerini, fluiduncias quattuor, vel f℥iv.

Water is Aqua, genitive Aquæ,

Aquæ, sufficient quantity, quantum sufficiat, add, adde.
Aquæ, quantum sufficiat adde fluiduncias triginta quattuor.

Using the ordinary symbols for expressing quantity, the prescription is as follows:

℞. Tincturæ ferri chloridi,	f℥vss;
Acidi acetici diluti,	f℥j;
Liquoris ammonii acetatis,	f℥vj, fʒvj;
Elixiris aromatici,	f℥iiiss;
Glycerini,	f℥iv;
Aquæ, et adde quantum sufficiat,	f℥xxxiv.—Misce.

In writing prescriptions for pills where they are to be made by the pharmacist and an excipient is required, it is customary to leave to the discretion of the compounder the quantity of the excipient to be used, so that the pills may be of the proper consistence and of a convenient size. Thus:

℞. Extracti nucis vomicæ,	gr. vj;
Acidi arsenosi,	gr. ss;
Ferri reducti,	gr. xxiv;
Extracti glycyrrhizæ pulverati,	q. s.—Misce.

Extract of Licorice is here the excipient of which q. s., a sufficient quantity, is to be used, as stated above.

Principles of Medical Combination.—In writing prescriptions it is well to remember that simplicity is to be preferred to a multiplicity of drugs, but that both may be carried to extremes. Often there is much to be gained by an intelligent combination of remedial agents, but the prescriber should have in his mind a clear idea of what should be the action of the drugs used singly and combined. No ingredient should enter into a prescription unless there is some clear indication for its use. Drugs slow to manifest their effect, but long continued in their action, should not enter into a prescription with those that act quickly and are fleeting in their effect. Powerful remedies should be given singly if they are to be pushed until their full physiological action is experienced. Prescriptions containing more than four or five ingredients are usually an exhibition of the fact that the prescriber is ignorant of the action of any one of them. Among the commonest reasons for administering several drugs in the same prescriptions are the following:

(1) *To Obtain the Combined or Joint Action of Several Drugs upon a Particular Tissue, Organ, or Centre.*—This might be illustrated by a prescription containing chloral and potassium bromide, given for the relief of convulsions due to

spinal irritation or stimulation. As is well known, chloral depresses the motor and potassium bromide the sensory side of the cord, thereby bringing about an effect not produced by either used singly. A combination of mild mercurous chloride and podophyllin for their joint effect upon the liver may be cited as another instance of the combined effect of drugs upon a particular organ. Under this heading may be mentioned what Dr. H. C. Wood[1] calls "crossed action of drugs;" that is, the combination of two drugs having a similar action upon one part of the organism and dissimilar action upon other parts of the body. This he illustrates by prescribing conjointly chloral and morphine. They both produce (cross at) sleep by their somnifacient influence upon the brain; chloral depresses the circulation, and does not give rise to nausea; morphine does not depress the heart, but one of its most frequent untoward effects is to produce nausea. A prescription containing both of these drugs, in smaller quantities than would be required of either one used singly, will bring about the desired effect (sleep), unaccompanied by the undesired effect (circulatory depression or nausea) of either one.

(2) *To Act upon Different Tissues, Organs, or Centres, or to Combat Several Symptoms.*—A prescription for acute bronchitis accompanied by fever and excessive cough may serve as an illustration. In such a case syrup of ipecac may be given to act as a sedative expectorant, tincture of aconite to quiet the circulation and allay fever, and potassium bromide to quiet excessive coughing. In a case of cystitis it may be desired to relieve pain and irritation with camphorated tincture of opium, and render the urine alkaline with solution of potassium. In some other case it may be desired to stimulate the heart with one remedy and the kidney

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[1] *System of Practical Therapeutics*, Hare: "General Therapeutic Indications," vol. i. p. 51.

with another. Frequently in attempting to give the patient relief from several annoying symptoms the physician is led into employing too great a number of drugs. Not unfrequently an unfortunate with phthisis is plied with medicines to quiet excessive cough, prevent night-sweats, reduce fever; improve the appetite, allay pain, and to meet a number of symptoms from which he suffers.

(3) *To modify the effect of some other drug*, as the use of aloes to prevent the constipating effect of iron; extract of hyoscyamus or alcoholic extract of belladonna-leaves in purgative pills to keep them from griping; volatile oils or camphorated tincture of opium in castor oil to prevent griping; solution of potassium arsenite with potassium iodide or bromide to ward off the painful acne caused by long-continued use of these drugs.

(4) *To form new compounds*, such as "Black Wash" by adding mild mercurous chloride to solution of lime; "Yellow Wash" by combining corrosive mercuric chloride with solution of lime: lead sulphate is often intentionally made by dissolving lead acetate and zinc sulphate in water.

In the following prescription it is the intention of the physician to form chlorine. This may be accomplished by adding to the potassium chlorate contained in a bottle *first* the acid, then the other ingredients. If the potassium chlorate is dissolved in the water before the acid is added, no chlorine will be formed:

℞. Potassii chloratis,		ʒij;
Acidi hydrochlorici,		ʒj;
Syrupi,		℥j;
Aquæ,	q. s.	℥vj.—Misce.

Sig. Use as a gargle.

(5) *To Afford a Convenient, Pleasant, and Efficient Method of Administration.*—Solids, such as pills, capsules, tablets,

and powders, are preferred to liquids by most persons, but infants and many adults are unable to swallow either of the first three. Liquids are much more readily absorbed than pills, and if it be deemed advisable to prescribe remedies in this form, they should be made as agreeable to the palate and the sight as circumstances will permit, without sacrificing efficiency of action to elegant pharmacy. In deciding upon a vehicle it is best to select one that has little or no medical action, and, if practicable, one in which the other ingredients are soluble. The aromatic waters are good solvents for most of the soluble salts, gums, acids, and gelatin, and, as they are agreeable to the taste, are largely employed as vehicles for these substances. Resins, oleoresins, and volatile oils may be administered in alcoholic solution, or if it be desired to administer them in aqueous liquids they should be emulsified with acacia or tragacanth: they are preferably administered in capsules. Highly resinous fluid extracts can only be given in solution with strong alcoholic liquids, or in aqueous liquids by means of an emulsifying agent, such as acacia, tragacanth, or some thick, viscid, adhesive liquid. Good vehicles in which to administer many of the fluid extracts are aromatic elixir, compound tinctures of cardamom, of gentian, or of lavender, or other mild tinctures. If the quantity of fluid extract to be given be small, any of the aromatic syrups may be employed. It should not be forgotten that tinctures contain considerable alcohol, and are not, therefore, suitable vehicles in which to administer circulatory depressants. The taste of many bitter substances like quinine, and salty drugs like ammonium chloride, may be made more agreeable by the addition of any of the preparations of glycyrrhiza. Caustic or irritating medicines, whether liquid or solid, must be well diluted before being swallowed. In making pills, powders, etc. containing drugs of this nature a large quantity of excipient should be used.

Other less frequently considered reasons for combining several remedies in the same prescription are: *To obtain an action not manifested to a marked degree by either one of the drugs*, as a combination of ipecac and opium to produce diaphoresis; *to act as preservatives*, as boric acid to solution of alkaloids; *to prevent chemical changes in any of the ingredients*, as tartaric acid in solutions of corrosive mercuric chloride which are intended to be used as local antiseptics for open wounds.

1. INCOMPATIBILITIES.

Prescriptions are said to be *incompatible* when they contain ingredients which *directly oppose each other in their medicinal effects*, when the *ingredients act upon each other chemically* and form *new chemical compounds*, or when the ingredients of which they are composed make *unsightly or disagreeable combinations* not due to chemical action. Therapeutical, chemical, and pharmaceutical incompatibilities are, then, the three forms which engage our attention. It is the fear of making these undesirable compounds that leads many physicians in their early days of practice to use one of the various formularies. As it would be difficult to mention all the possible incompatibilities, attention will be directed only to those which are most frequent.

Therapeutical Incompatibility.—When the medicinal value of any of the ingredients of a prescription is rendered negative by some other ingredient, the combination is considered to be therapeutically incompatible. Medicines may oppose each other in their effect upon one part of the system, and have a similar beneficial effect upon some other part; therefore the object sought to be attained by the use of a prescription must be known before an opinion as to its therapeutical compatibility can be expressed. At first glance a prescription containing digitalis and aconite would seem to be a therapeutical incompatibility, and so it would be if the object of the prescriber were either to depress or to stimulate the heart, but there are cases of cardiac arhythmia in which such a combination is of value. No fixed and invariable rules can be formulated for the avoidance of this form of incompatibility, as every medicinal combination is a law unto itself; but generally drugs which stimulate and those which depress a similar part of the system should not be combined in the same prescription *if the object sought to be attained is either stimulation or depression.* If neither stimulation nor depression, but some other object, is the end in view in such a combination, the prescription may not be therapeutically incompatible. This general rule may refer to the effect of drugs upon any part of the system—circulatory, respiratory, or glandular—or upon the various organs and centres.

Chemical Incompatibility.—When a *new chemical compound* results from combining two or more ingredients in a prescription, it is said to be a *chemical* incompatibility. This new compound may be either *soluble* or *insoluble* in the liquids of the prescription; if insoluble, precipitation will result; in many instances the newly-formed chemical is an explosive or is a violent poison. Chemical incompatibilities are frequently intentional upon the part of the prescriber. The following prescription is an instance of this sort:

℞. Potassii bicarbonatis,	ʒiv;
Acidi salicylici,	ʒij;
Aquæ menthæ piperitæ,	f℥vj.—Misce.

Sig. Two teaspoonfuls in water every two hours.

The intention in this prescription is to form potassium salicylate, which is very much more soluble than salicylic acid.

The following are some of the more common chemical incompatibilities:

Acids combine with bases to form salts, and are incompatible with oxides, alkalies, alkaline salts, hydrates, and carbonates.

They all precipitate albumin. Strong mineral acids will liberate weak or volatile acids from their combination with bases.

Antipyrine is incompatible with spirit of nitrous ether, ferric chloride, ferric sulphate, iodine, or any preparation containing free iodine, mercuric chloride, Donovan's solution, tannic acid, and in the form of powder with carbolic acid, chloral hydrate, resorcin, thymol, salol and alkaline salicylates, calomel.

Arsenious Acid is precipitated by salts of iron, magnesia, and solution of lime.

Carbolic Acid forms sulphocarbolates with soluble sulphates.

Chromic Acid is explosive with organic matter, such as sugar, tannic acid, and with readily-oxidizable substances, as sulphur, the sulphides, etc.

Hydrobromic Acid and *Hydrochloric Acid* precipitate solutions of silver and lead.

Gallic Acid precipitates from solution antimony and potassium tartrate, silver nitrate, lead acetate, and the ferric salts.

Nitric and Nitrohydrochloric Acids form explosives with glycerin and all readily-oxidizable substances. Mineral acids should never be added undiluted to tinctures or to fluid extracts, as such combinations have resulted in serious explosions.

Salicylic Acid and salicylates are incompatible with salts of iron.

Sulphuric Acid precipitates solutions of barium, calcium, and lead salts, and forms explosives with sugar and oil of turpentine. The undiluted acid instantly carbonizes syrups.

Tannic Acid is incompatible with alkaloids, preparations containing alkaloids, salts of iron, lead, silver, antimony and potassium tartrate, and many metallic salts.

Alkalies and Alkaline Carbonates form salts with acids, and precipitate antimony and potassium tartrate, many other metallic salts, and salts of alkaloids.

Silver Nitrate.—The only two substances which it is considered permissible to be given with this chemical are the extracts of opium and hyoscyamus. In making the solution distilled water should be employed.

Silver Oxide is explosive with organic and readily-oxidizable substances.

Strophanthus (alcoholic liquid preparations) slowly undergoes change with water or aqueous preparations, and forms a toxic substance.

Santonin forms with sodium bicarbonate a soluble sodium santonate, and is decomposed by mineral acids. (See *Glucosides.*)

Sodium Bicarbonate is incompatible with acids, metallic salts, and alkaloidal salts.

Sodium Chlorate. (See *Potassium Chlorate.*)

Sodium Ethylate is decomposed by water.

Spirit of Nitrous Ether liberates iodine from solutions of ammonium, potassium, and sodium iodides, and gives a green precipitate with antipyrine.

Syrups are instantly carbonized by undiluted sulphuric acid.

Tinctures or Fluid Extracts containing alkaloids are chemically incompatible with soluble iodides, alkaline carbonates, solution of lime, and tannic acid. Those containing tannin are incompatible with tincture of ferric chloride and ferric salts.

Examples of Chemical Incompatibilities.—The following formulæ are examples of chemical incompatibilities:

℞. Acidi nitrohydrochlorici, fʒj;
Tincturæ cinchonæ compositæ, q. s. ad f℥iij.—Misce.
Sig. Teaspoonful in water after meals.

This would, to all appearances, be an excellent tonic, but is dangerous and has resulted in explosions soon after being compounded.

℞. Acidi sulphurici aromatici,	gtt. xvj;
Misturæ cretæ,	f℥ij.—Misce.

Sig. Shake. Teaspoonful in water every three hours.

The acid would be neutralized by the calcium carbonate in the chalk-mixture, with precipitation of the insoluble calcium sulphate.

℞. Syrupi ferri iodidi,	fʒiv;
Tincturæ cinchonæ compositæ, q. s. ad	f℥iij.—Misce.

Sig. Teaspoonful in water three times a day.

The tannin in the compound tincture of cinchona with the syrup of ferrous iodide would form tannate of iron, and would make a very black, inky compound.

℞. Tincturæ ferri chloridi,	fʒiv;
Tincturæ gentianæ compositæ,	f℥vj.—Misce.

Sig. Teaspoonful in water after meals.

This makes a very black, inky compound, due to tannin and iron. It is one of the most frequent incompatibilities.

℞. Ammonii carbonatis,	ʒij;
Syrupi scillæ,	f℥j;
Syrupi tolutani,	f℥j;
Aquæ,	f℥j.—Misce.

Sig. Teaspoonful in water every three hours.

Syrup of squill is highly acid, and would liberate carbonic oxide, with the formation of ammonium acetate.

℞. Cocainæ hydrochloratis,	gr. x;
Zinci sulphatis,	gr. xxx;
Aquæ rosæ,	f℥iij.—Misce.

Sig. Use as an injection.

Cocaine hydrochlorate is precipitated by zinc sulphate.

℞. Potassii permanganatis, ʒij;
Glycerini, f℥j.—Misce.
Sig. Twenty drops in a glass of water as a gargle.

This is highly explosive.

℞. Sodii salicylatis, ʒiv;
Quininæ sulphatis, ʒj;
Acidi sulphurici aromatici, fʒj;
Aquæ, q. s. ad f℥vj.—Misce.
Sig. Two teaspoonfuls in water every two hours.

In this prescription the aromatic sulphuric acid employed to dissolve the quinine sulphate would decompose the sodium salicylate into salicylic acid, which, being quite insoluble in water, would precipitate, while there would also be sodium sulphate in solution.

℞. Ammonii benzoatis, ʒiv;
Acidi nitrici diluti, fʒij;
Aquæ menthæ piperitæ, q. s. ad f℥iv.—Misce.
Sig. Teaspoonful in water every four hours.

The diluted nitric acid would decompose the ammonium benzoate into ammonium nitrate and benzoic acid; the latter, being insoluble, would remain undissolved in the water.

℞. Acidi sulphurici aromatici, fʒij;
Spiritus ammoniæ aromatici, fʒiv;
Extracti hæmatoxyli fluidi, fʒvj;
Spiritus chloroformi, fʒij;
Syrupi zingiberis, q. s. ad f℥iv.—Misce.
Sig. Two teaspoonfuls in water every two or three hours.
Shake well before using.

The aromatic sulphuric acid with aromatic spirit of ammonia would form ammonium sulphate, which is soluble in the liquids.

℞. Acidi chromici, ʒj;
Alcoholis, f℥j.—Misce.
Sig. Apply with a glass rod.

This is explosive.

℞. Quininæ bisulphatis, ʒij;
Potassii bromidi, ʒij;
Aquæ, q. s. ad f℥vj.—Misce.
Sig. Tablespoonful every three hours.

The quinine is precipitated by the potassium bromide.

℞. Strychninæ sulphatis, gr. j;
Potassii iodidi, ʒiv;
Aquæ, q. s. ad f℥iij.—Misce.
Sig. Teaspoonful in water three times a day.

It will be remembered that alkaloids and alkaline salts are precipitated by soluble iodides.

℞. Hydrargyri chloridi corrosivi, gr. j;
Potassii iodidi, ʒiv;
Aquæ, q. s. ad f℥iij—Misce.
Sig. Teaspoonful in water after each meal.

In this prescription potassium iodide precipitates red mercuric iodide, which is redissolved in the excess of potassium iodide. This prescription is very frequently intentionally ordered, and is valuable.

No alkaloids nor liquids containing alkaloids should enter into prescriptions containing soluble iodide and corrosive mercuric chloride, as the potassio-mercuric iodide formed is a powerful precipitant for alkaloids. Such a prescription as the following should never be written:

℞. Hydrargyri chloridi corrosivi,	gr. j;
Potassii iodidi,	ʒij;
Tincturæ cinchonæ compositæ,	℥iij.—Misce.

Sig. Teaspoonful three times a day.

Here the potassio-mercuric iodide precipitates the cinchona alkaloids.

℞. Potassii chloratis,	ʒj;
Acidi tannici,	ʒss;
Sacchari,	ʒij.

Misce et ft. chartulæ No. i.

Sig. One in a glass of water, and use as a gargle three times daily.

This prescription could be dispensed, but great care should be observed not to triturate the ingredients, as such a procedure would result in explosion.

℞. Argenti nitratis,	gr. xx;
Aquæ,	f℥j.—Misce.

Sig. Apply to ulcer.

This solution would be cloudy on account of the chlorides in undistilled water, the cloudiness being due to the formation of insoluble silver chloride.

℞. Ammonii iodidi,	ʒij;
Spiritus ætheris nitrosi,	f℥j;
Syrupi,	f℥j;
Aquæ,	q. s. ad f℥iij.—Misce.

Sig. Teaspoonful in water every three hours.

This prescription would be deep amber in color, due to the decomposition of ammonium iodide by spirit of nitrous ether.

Pharmaceutical or Physical Incompatibilities.—A prescription is pharmaceutically incompatible when it contains ingredients which undergo undesirable physical changes when mixed, although being unaltered chemically. The most frequent undesirable physical change is the separation of solids or of liquids from solution by the addition of another liquid or solid. The question of solvents and solubility is one which has much bearing upon this form of incompatibility, and it is a lack of knowledge or a neglect to practice the principles governing solution which leads to the formation of these compounds. Water and alcohol are the most universally used solvents; glycerin, ether, chloroform, carbon disulphide, and oil of turpentine are used as special solvents. *Water* is a good solvent for soluble salts, alkaloidal salts, gums, sugar, acids, extractives, albumin, and gelatin. Alcohol is a poor solvent for these substances, and in large quantities it precipitates them from concentrated aqueous solutions. *Alcohol* is a good solvent for volatile oils, camphoraceous substances, balsams, resins, and oleoresins. Water is a poor solvent for these substances, and in large quantities it precipitates them from alcoholic solutions. Both water and alcohol become relatively poorer solvents for these respective substances in proportion as one is added to the other. Instances of this fact are: aqueous solutions of acacia (a gum) are precipitated by the addition of alcohol; alcoholic solutions of resin of podophyllin are precipitated by water.

Some Common Pharmaceutical Incompatibilities.—**Acids** precipitate glycyrrhizin from liquid preparations of glycyrrhiza. In the following prescription the object of the acid is to dissolve the quinine sulphate, but it precipitates glycyrrhizin from the fluid extract of glycyrrhiza. The object of the fluid extract is to disguise the taste of the quinine:

℞.	Quininæ sulphatis,	ʒij;
	Extracti glycyrrhizæ fluidi,	f℥j;
	Acidi sulphurici aromatici,	fʒj;
	Aquæ, q. s. ad	f℥vj.—Misce.

Sig. Two teaspoonfuls every three hours during the day.

Carbolic Acid coagulates *collodions.* It is a very good plan to add a small quantity of glycerin to aqueous solutions of carbolic acid to ensure perfect solution.

Emulsions are "cracked" by alcohol or by alcoholic liquids.

Mucilages are precipitated or coagulated by alcohol or by alcoholic liquids.

Syrups.—The sugar in syrups is crystallized if alcohol or alcoholic liquids are added in large quantities.

Volatile Oils should not be added to water or to watery solutions in greater proportions than one drop of oil to the ounce of water.

Aromatic Waters liberate their volatile principles from solution and become cloudy if *saturated* with a soluble salt; therefore saturated solutions should not be made in aromatic waters.

Spirits containing volatile liquids or solids become cloudy upon the addition of water or aqueous liquids. Spirit of nitrous ether is an exception.

Resinous Fluid Extracts and Tinctures, and Oleoresins are precipitated by water and aqueous liquids. If it be desired to give them in aqueous suspension, they should be emulsified by adding mucilage of acacia or of tragacanth.

Examples of Pharmaceutically Incompatible Prescriptions.—The following formulæ are examples of pharmaceutical incompatibilities:

℞.	Magnesii sulphatis,	ʒj;
	Extracti rhamni purshianæ fluidi,	fʒj;
	Aquæ,	fʒij.—Misce.

Sig. Teaspoonful at bedtime.

The magnesium sulphate, although soluble in the water, would at once be precipitated by the alcoholic fluid extract.

Precipitation from the fluid extract would take place also when added to water.

℞. Mucilaginis acaciæ, f℥iss;
Tincturæ cubebæ, f℥iv.—Misce.
Sig. Two teaspoonfuls three times daily.

The alcoholic tincture would precipitate acacia from the mucilage.

℞. Olei erigerontis, fʒij;
Spiritus juniperis, f℥j;
Aquæ menthæ piperitæ, q. s. ad f℥iv.—Misce.
Sig. Tablespoonful three times a day.

The oil would float on top of the solution or would make a cloudy mixture if shaken.

℞. Copaibæ, fʒv;
Aquæ, f℥iv.—Misce.
Sig. Teaspoonful after meals.

Copaiba, which is an oleoresin, is insoluble in water; by the addition of acacia the prescription could be dispensed as an emulsion.

℞. Extracti cannabis indicæ fluidi, f℥ij;
Acidi hydrocyanici diluti, fʒj.—Misce.
Sig. Ten drops every three hours.

The bulk of diluted hydrocyanic acid being water, this would cause the resin in the fluid extract of cannabis indica to separate and adhere to the sides of the bottle.

℞. Tincturæ guaiaci,
Tincturæ lavandulæ compositæ, *āā.* f℥ij.—Misce.
Sig. Teaspoonful after meals.

This prescription illustrates the fallacy of prescribing a strong alcoholic tincture with one having diluted alcohol for a menstruum. In this prescription resin of guaiac would separate and adhere to the sides of the bottle.

℞. Tincturæ cimicifugæ,
Syrupi, *āā.* f℥iij.—Misce.
Sig. Teaspoonful three times a day.

Tincture of cimicifuga has a strong alcoholic menstruum, and the sugar would slowly crystallize out of solution.

℞. Potassii iodidi, ℥ij;
Aquæ cinnamomi, q. s. ad f℥ij.—Misce.
Sig. Twenty drops after each meal, and gradually increase.

Water of cinnamon is a saturated solution of oil of cinnamon in distilled water, and if the liquid is saturated with any soluble salt, the oil would be thrown out of solution and cause the liquid to become cloudy.

℞. Chloralis, ʒij;
Camphoræ, gr. xxiv.
M. et ft. chartulæ xii.
Sig. Take one powder in whiskey at bedtime.

The directions to make into powders cannot be complied with, as by triturating these substances together they liquefy.

2. TABLE OF SOLUBILITIES.

The following table indicates the solubility of *one* part of the given drug in water and alcohol respectively.

	Water.	*Alcohol.*
Acacia,	2	Insoluble.
Acetanilidum,	194	5
Acidum Aceticum,	Freely miscible.	Freely miscible.
Acidum Arsenosum (glassy),	30	Sparingly.
Acidum Arsenosum (porcelain-like),	80	"
Acidum Benzoicum,	500	2

	Water.	*Alcohol.*
Acidum Boricum,	25.6	15
Acidum Carbolicum,	15	Readily.
Acidum Camphoricum,	Sparingly in cold water. Readily in hot water.	Readily.
Acidum Chromicum,	Readily.	Explosive.
Acidum Citricum,	.63	1.61
Acidum Gallicum,	100	5
Acidum Hydrobromicum Dilutum,	Freely miscible.	Freely miscible.
Acidum Hydrochloricum,[1]	" "	" "
Acidum Hydrocyanicum Dilutum,	" "	" "
Acidum Hydrophosphorosum,	" "	" "
Acidum Lacticum,	" "	" "
Acidum Nitricum,	" "	
Acidum Nitrohydrochloricum.	" "	
Acidum Oleicum,	Insoluble.	Readily.
Acidum Phosphoricum,	Freely miscible.	Freely miscible.
Acidum Salicylicum,	450	2.4
Acidum Stearicum,	Insoluble.	45
Acidum Sulphuricum,[2]	Freely miscible.	Freely miscible.
Acidum Sulphurosum,	" "	" "
Acidum Sulphuricum Aromaticum,	" "	" "
Acidum Tannicum,	1	.6
Acidum Tartaricum,	.8	2.5
Aconitina,	4430	37
Æther,	10 vol.	Freely miscible.
Æther Aceticus,	8	" "
Æthyl Bromidum,	Sparingly.	" "
Agaricinum,	"	130
Aloinum,	60	30
Alumen,	9	Insoluble.
Alumen Exsiccatum,	20	"
Alumini Hydras,	Insoluble.	"
Alumini Sulphas,	1.2	"
Ammonii Benzoas,	5	28
Ammonii Bromidum,	1.5	30
Ammonii Carbonas,	5	Partly soluble.
Ammonii Chloridum,	3	Almost insoluble.
Ammonii Iodidum,	1	9

[1] Strong mineral acids should be added to alcohol very carefully.

[2] So much heat is developed in mixing strong sulphuric acid with water or alcohol that the mixing requires great care.

	Water.	*Alcohol.*
Ammonii Nitras,	.5	20
Ammonii Valerianas,	Readily.	Readily.
Amyl Nitris,	Almost insoluble.	Freely miscible.
Anemoninum,	Very sparingly.	Very sparingly.
Antimonii et Potassii Tartras,	17	Insoluble.
Antimonii Oxidum,	Almost insoluble.	"
Antimonii Sulphidum,	Insoluble.	"
Antimonii Sulphidum Purificatum,	"	"
Antimonium Sulphuratum,	"	"
Anthrarobinum,	"	5
Antipyrini Benzoas,	Very sparingly.	Readily.
Antipyrini Salicylas,	" "	"
Antipyrinum,	.6	1
Apomorphinæ Hydrochloras,	45	45
Aristol,	Insoluble.	Very sparingly.
Argenti Iodidum,	"	Insoluble.
Argenti Nitras,	.6	26
Argenti Oxidum,	Almost insoluble.	Insoluble.
Arseni Iodidum,	7	30
Atropina,	130	3
Atropinæ Sulphas,	.4	6.2
Auri Chloridum,	Readily.	Readily.
Auri et Sodii Chloridum,	Very soluble.	Partly soluble.
Barii Chloridum,	2.5	Very sparingly.
Barii Dioxidum,	Insoluble.	Insoluble.
Benzinum,	"	6
Bismuthi Citras,	"	Insoluble.
Bismuthi et Ammonii Citras,	Readily.	Very sparingly.
Bismuthi Salicylas,	Insoluble.	Insoluble.
Bismuthi Subcarbonas,	"	"
Bismuthi Subnitras,	"	"
Bismuthi Subiodidum,	"	"
Bismuthi Subgallas,	"	"
Bromal Hydras,	Readily.	Soluble.
Bromoform,	300	Freely miscible.
Bromol,	Insoluble.	Freely soluble.
Bromum,	30	Readily, with gradual decomposition of the alcohol.
Caffeina,	80	33
Caffeina Citrata,	25	1

	Water.	*Alcohol.*
Calcii Bromidum,	.7	1
Calcii Carbonas Præcipitatus,	Almost insoluble.	Insoluble.
Calcii Chloridum,	1.5	8
Calcii Hypophosphis,	6.8	Insoluble.
Calcii Phosphas Præcipitatus,	Almost insoluble.	“
Calcii Sulphas Exsiccatus,	410	“
Calx,	750	“
Calx Chlorata,	Only partially.	Only partially.
Calx Sulphurata,	Very sparingly.	Insoluble.
Cambogia,	“ “	Only partially.
Camphora,	“ “	Readily.
Camphora Monobromata,	“ “	“
Carbonei Disulphidum,	535	“
Cerii Oxalas,	Insoluble.	Insoluble.
Chloral,	Readily.	Readily.
Chloralum Formamidatum,	20	3
Chloroformum,	Sparingly.	Readily.
Chrysarobinum,	Very sparingly.	Very sparingly.
Cinchonidinæ Sulphas,	70	66
Cinchonina,	3760	116
Cinchoninæ Sulphas,	66	10
Cocainæ Hydrochloras,	.48	3.5
Cocainæ Phenate,	Insoluble.	Readily.
Codeina,	80	3
Colchiceina,	Readily in hot. Sparingly in cold.	Readily.
Colchicina,	Readily.	“
Coniinæ Hydrobromas,	“	“
Convallarinum,	Sparingly.	“
Convallamarinum,	Readily.	“
Copaiba,	Insoluble.	Readily soluble in absolute alcohol.
Creolin,	Makes a milky mixture.	Freely miscible.
Creosotum,	150	Freely.
Creta Præparata,	Almost insoluble.	Insoluble.
Cupri Sulphas,	2.6	Almost insoluble.
Duboisinæ Sulphas.	Freely.	Freely.
Elaterinum,	4250	337
Eucalyptol,	Sparingly.	Freely.
Euonyminum,	“	Readily.
Euphorin,	Insoluble.	“

	Water.	*Alcohol.*
Europhen,	Insoluble.	Readily.
Ferri Albuminas,	Soluble.	Insoluble.
Ferri Arsenas,	Insoluble.	“
Ferri Carbonas Saccharatus,	Partly soluble.	“
Ferri Chloridum,	Readily.	Readily.
Ferri Citras,	Slowly, but completely.	Insoluble.
Ferri et Ammonii Citras,	Readily and completely.	“
Ferri et Ammonii Sulphas,	3	“
Ferri et Ammonii Tartras,	Readily.	“
Ferri et Potassii Tartras,	“	“
Ferri et Quininæ Citras,	Slowly, but completely.	Only partially.
Ferri et Quininæ Citras Solubilis,	Readily and completely.	“ “
Ferri et Strychninæ Citras,	“ “	“ “
Ferri Hypophosphis,	Sparingly.	Insoluble.
Ferri Iodidum Saccharatum,	7	Only partially.
Ferri Lactas,	Slowly in 40.	Almost insoluble.
Ferri Phosphas Solubilis,	Readily and completely.	Insoluble.
Ferri Pyrophosphas Solubilis,	“ “	“
Ferri Sulphas,	1.8	“
Ferri Sulphas Exsiccatus,	Slowly, but completely.	“
Ferri Sulphas Granulata,	1.8	“
Ferri Valerianas,	Insoluble.	Readily.
Glycerinum,	Readily.	“
Glycyrrhizinum Ammoniatum,	“	“
Guaiacolum,	200	“
Guaiacoli Benzoas,	Insoluble.	Soluble.
Guaiacoli Salicylas,	“	“
Homatropinæ Hydrobromas.	Readily.	Readily.
Hydrargyri Chloridum Corrosivum,	16	3
Hydrargyri Chloridum Mite,	Insoluble.	Insoluble.
Hydrargyri Cyanidum,	12.8	15
Hydrargyri Iodidum Flavum,	Almost insoluble.	Insoluble.
Hydrargyri Iodidum Rubrum,	“ “	130
Hydrargyri Oxidum Flavum,	“ “	Insoluble.
Hydrargyri Oxidum Rubrum,	“ “	“
Hydrargyri Salicylas,	“ “	“
Hydrargyri Subsulphas Flavus,	2000	“
Hydrargyrum Ammoniatum,	Almost insoluble.	Almost insoluble.
Hydrargyrum cum Creta,	Insoluble.	Insoluble.
Hydrastinæ Hydrochloras,	.3	3
Hydronaphtol,	1100	Readily.

	Water.	*Alcohol.*
Hyoscinæ Hydrobromas,	1.9	13
Hyoscyaminæ Hydrobromas,	.3	2
Hyoscyaminæ Sulphas,	.5	2.5
Hypnal,	Readily.	Readily.
Hypnone,	Insoluble.	“
Ichthyol,	Readily.	Partially.
Iodoformum,	Very sparingly.	52 (5.2 ether.)
Iodol,	“ “	3
Iodum,	5000	10
Lithii Benzoas,	4	12
Lithii Bromidum,	.6	Readily.
Lithii Carbonas,	80	Insoluble.
Lithii Citras,	2	Almost insoluble.
Lithii Citras Effervescens,	Readily.	“ “
Lithii Salicylas,	“	Readily.
Lysol,	Freely miscible.	Freely miscible.
Magnesia,	Almost insoluble.	Insoluble.
Magnesia Ponderosa,	“ “	“
Magnesii Carbonas,	“ “	“
Magnesii Citras Effervescens,	Readily.	Almost insoluble.
Magnesii Sulphas,	1.5	“ “
Mangani Dioxidum,	Insoluble.	“ “
Mangani Sulphas,	.8	“ “
Menthol,	Sparingly.	Readily.
Methyl Salicylas,	“	“
Methylene Blue,	Readily.	“
Morphine,	4350	300
Morphinæ Acetas,	2.5	47.6
Morphinæ Hydrochloras,	24	62
Morphinæ Sulphas,	21	702
Naphtalinum,	Insoluble.	15
Naphtol,	1000	.75
Pancreatinum,	Slowly, but almost completely.	Insoluble.
Papayotinum,	Readily.	“
Paraldehydum,	8.5	Freely miscible.
Pelletierinæ Tannas,	700	80
Pepsinum,	100	Insoluble.
Pepsinum Saccharatum,	Readily.	“
Phenacetin,	Sparingly.	16
Phenocoll Hydrochloridum,	20	Readily.

	Water.	*Alcohol.*
Piperazinum,	Readily.	Readily.
Phosphorus,	Insoluble.	350 abs. alcohol.
Phostigminæ Salicylas,	150	12
Phostigminæ Sulphas,	Readily.	Readily.
Picrotoxinum,	240	9
Pilocarpinæ Hydrochloras,	Readily.	Readily.
Piperinum,	Almost insoluble.	30
Plumbi Acetas,	2.3	21
Plumbi Carbonas,	Insoluble.	Insoluble.
Plumbi Iodidum,	2000	Very slightly.
Plumbi Nitras,	2	" "
Plumbi Oxidum,	Almost insoluble.	Insoluble.
Potassa,	.5	2
Potassa Sulphurata,	2, with the exception of a small residue.	Only the Potassium Sulphide.
Potassii Acetas,	.36	1.9
Potassii Bicarbonas,	3.2	Almost insoluble.
Potassii Bichromas,	10	Insoluble.
Potassii Bitartras,	201	Sparingly.
Potassii Bromidum,	1.6	200
Potassii Carbonas,	1.1	Insoluble.
Potassii Chloras,	16.7	"
Potassii Citras,	.6	Sparingly.
Potassii Cyanidum,	2	"
Potassii et Sodii Tartras,	1.4	Almost insoluble.
Potassii Ferrocyanidum,	4	Insoluble.
Potassii Hypophosphis,	.6	7.3
Potassii Iodidum,	.75	18
Potassii Nitras,	3.8	Sparingly.
Potassii Permanganas,	16	Decomposed.
Potassii Sulphas,	9.5	Insoluble.
Pyrogallol,	1.7	1
Pyoktanin,	75	Readily.
Quinidinæ Sulphas,	100	8
Quinina,	1670	6
Quininæ Bisulphas,	10	32
Quininæ Hydrobromas,	54	.6
Quininæ Hydrochloras,	34	3
Quininæ Sulphas,	740	65
Quininæ Valerianas,	100	5
Resorcinum,	.6	.5

	Water.	*Alcohol.*
Saccharinum,	400	30
Saccharum,	.5	175
Saccharum Lactis,	6	Insoluble.
Salicinum,	28	30
Salol,	Sparingly.	10
Salophen,	"	Readily.
Santoninum,	"	40
Soda,	1.7	Readily.
Sodii Acetas,	1.4	30
Sodii Arsenas,	4	Sparingly.
Sodii Benzoas,	1.8	45
Sodii Bicarbonas,	11.3	Insoluble.
Sodii Bisulphis,	4	72
Sodii Boras,	16	Insoluble.
Sodii Bromidum,	1.2	13
Sodii Carbonas,	1.6	Insoluble.
Sodii Chloras,	1.1	100
Sodii Chloridum,	2.8	Almost insoluble.
Sodii Ethylas,	Decomposed.	Readily.
Sodii Hypophosphis,	1	30
Sodii Hyposulphis,	.65	Insoluble.
Sodii Iodidum,	.6	3
Sodii Nitras,	1.3	100
Sodii Nitris,	1.5	Sparingly.
Sodii Phosphas,	5.8	Insoluble.
Sodii Pyrophosphas,	12	"
Sodii Salicylas,	.9	6
Sodii Sulphas,	2.8	Insoluble.
Sodii Sulphis,	4	Sparingly.
Sodii Sulphocarbolas,	4.8	132
Somnal,	3	Readily.
Soziodol,	Readily.	"
Sparteinæ Sulphas,	"	"
Strontii Bromidum,	1.05	"
Strontii Iodidum,	.6	Fairly.
Strontii Lactas,	4	"
Strychnina,	6700	110
Strychninæ Sulphas,	50	109
Sulphonal,	20 boiling water. 455 cold "	Readily.
Sulphuris Iodidum,	Almost insoluble.	Iodine alone sol.

	Water.	*Alcohol.*
Sulphur Lotum,	Insoluble.	Insoluble.
Sulphur Præcipitatum,	"	"
Sulphur Sublimatum,	"	"
Terebenum,	Sparingly.	Freely.
Terpini Hydras,	250	10
Terpinol,	Sparingly.	Readily.
Thymol,	1200	Very soluble.
Uralium,	Insoluble.	Readily.
Urethane,	1	.6
Veratrina,	Sparingly.	3
Xylol,	Insoluble.	Readily miscible.
Zinci Acetas,	2.7	36
Zinci Bromidum,	Readily.	Readily.
Zinci Carbonas Præcipitatus,	Insoluble.	Insoluble.
Zinci Chloridum,	.3	Readily.
Zinci Iodidum,	Readily.	Very soluble.
Zinci Oxidum,	Insoluble.	Insoluble.
Zinci Phosphidum,	"	"
Zinci Sulphas,	.6	"
Zinci Valerianas,	100	40

PART III.—OFFICIAL PREPARATIONS, AND METHODS OF PRESCRIBING.

1. ACETA.

(*Vinegars.*)

VINEGARS are liquid preparations made by treating vegetable substances with diluted acetic acid. In prescribing the Acetæ it must not be forgotten that they are acid in reaction, consequently they should not be combined with alkaline carbonates, alkalies, or other substances which are incompatible with acids. It is not an uncommon error for ammonium carbonate to be prescribed in combination with syrup of squills. The first syrup is made by dissolving sugar in the vinegar of squills, and therefore, being strongly acid, decomposes the salt, with the liberation of carbon dioxide and the conversion of the ammonium carbonate into ammonium acetate. The vinegars are not so stable as the tinctures. Only two are official:

Acetum Opii (Black Drop),	Dose, .3–1.2 C.c.,	5–20 ♏.
Acetum Scillæ,	Dose, .6–1.8 C.c.,	10–30 ♏.

Official vinegars may be prescribed in aqueous, alcoholic, or syrupy liquids:

℞. Aceti opii, fʒss;
Syrupi ipecacuanhæ, fʒj;
Syrupi tolutani, f℥ij.—Misce.
Sig. Teaspoonful every two hours.

℞. Aceti scillæ,
Tincturæ digitalis, *āā.* C.c. 15.—Misce.
Sig. Thirty drops in water every eight hours.

2. AQUÆ.

(*Waters.*)

Waters are aqueous solutions of volatile substances. Excepting ammonia-water, stronger ammonia-water, bitter almond-water, chlorine-water, chloroform-water, creosote-water, and solution of hydrogen dioxide, waters are mostly used as solvents and vehicles, and may be administered in much larger quantities than indicated below, if it is so desired. Saturated solutions should not be made with the aromatic waters, as the latter are already saturated with a volatile oil, and any attempt to saturate them with another substance results in the separation of the oil and the formation of a milky mixture. Distilled water is largely used in collyriæ and as a solvent for silver nitrate, potassium permanganate, corrosive mercuric chloride, barium chloride, alkaloids, and all other substances soluble in, but acted upon chemically by, the organic or inorganic matter in undistilled water. A practice frequently resorted to, of dissolving silver nitrate in rose-water, is to be condemned, as the organic matter contained therein causes the silver to be precipitated slowly. The *official waters* are as follows:

	Dose.	
Aqua, pure natural water.		
Aqua Ammoniæ,	Locally, counter-irritant.	
Aqua Ammoniæ Fortior,	Locally, counter-irritant.	
Aqua Amygdalæ Amaræ,	3.7–7.5 C.c.,	1–2 fʒ.
Aqua Anisi,	3.7–30 C.c.,	1–8 fʒ.
Aqua Aurantii Florum,	3.7–30 C.c.,	1–8 fʒ.
Aqua Aurantii Florum Fortior,	Used for making Aquæ Aurantii Florum.	
Aqua Camphoræ,	3.7–15 C.c.,	1–4 fʒ.
Aqua Chlori,	1.8–7.5 C.c.,	½–2 fʒ.
Aqua Chloroformi,	3.7–30 C.c.,	1–8 fʒ.
Aqua Cinnamomi,	3.7–30 C.c.,	1–8 fʒ.
Aqua Creosoti,	3.7–30 C.c.,	1–8 fʒ.

	Dose.	
Aqua Destillata,	Solvent.	
Aqua Fœniculi,	3.7–30 C.c.,	1–8 fʒ.
Aqua Hydrogenii Dioxidi,	3.7–7.5 C.c.,	1–2 fʒ.
Aqua Menthæ Piperitæ,	3.7–30 C.c.,	1–8 fʒ.
Aqua Menthæ Viridis,	3.7–30 C.c.,	1–8 fʒ.
Aqua Rosæ,	3.7–30 C.c.,	1–8 fʒ.
Aqua Rosæ Fortior,	Used for making Aquæ Rosæ.	

The following prescriptions illustrate the value of waters as solvents and pleasant vehicles:

℞. Tincturæ aconiti, gtt. xxiv;
Spiritus ætheris nitrosi, fʒiv;
Syrupi, fʒiij;
Aquæ menthæ viridis, q. s. ad f℥iij.—Misce.
Sig. Teaspoonful in cold water every two hours.

℞. Acidi carbolici, gtt. viij;
Bismuthi subnitratis, ʒiv;
Aquæ cinnamomi, f℥j;
Aquæ, q. s. ad f℥ij.—Misce.
Sig. "Shake well." Teaspoonful every two hours.

℞. Potassii bromidi, ʒiss;
Aquæ, q. s. ad f℥ij.—Misce.
Sig. Two teaspoonfuls in water three times a day.

℞. Argenti nitratis, gr. xx;
Aquæ destillatæ, fʒij.—Misce.
Sig. "For local use only." Apply to ulcer.

3. CACHETÆ.
(*Cachets.*)

Cachets, or wafers, are little round, concave solids, having very much the shape of small watch-crystals, with flattened margins of about an eighth to a quarter of an inch in breadth.

They are made in large quantities by pressing soft dough between hot iron plates. The heat quickly evaporates the water and leaves a little round concave wafer, which is very thin, crisp, and porous. Cachets vary in size from ½ to 1⅜ inches in diameter, and they afford a pleasant method of administering disagreeable powders. The only advantage they possess over capsules is that larger quantities of powders can be given at one dose than in capsules. They are prepared for use by filling the concavity of one wafer with the medicine, and then fitting to its margin the margin of another wafer, which has previously been moistened. By firm pressure the two wafers adhere tightly, and hold between their concavities the powdered drugs.

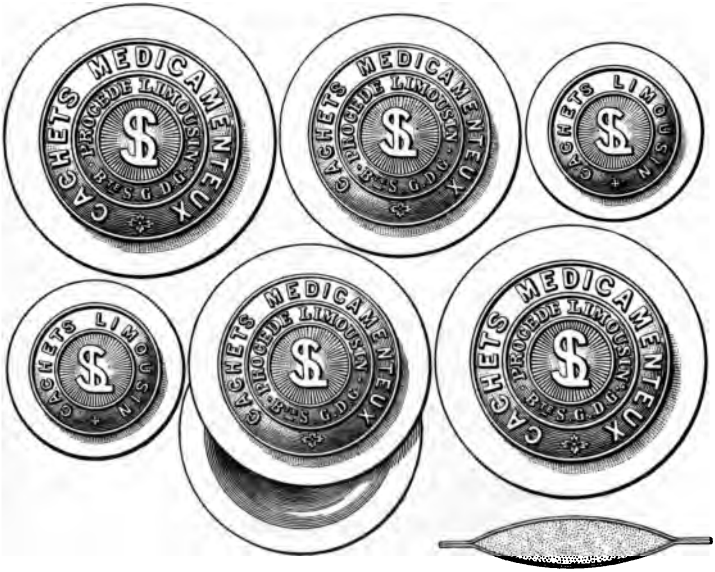

FIG. 1.—Different Sizes of Cachets, with sectional view of a filled cachet.

When the patient is ready to take the prepared cachet, it should be dipped into water, floated upon a tablespoonful of water, placed far back upon the tongue, and swallowed. As water makes the cachet soft, pliable, and slippery, it is no more difficult to swallow than an oyster. Particular directions should be given for taking cachets, as many persons are not familiar with their use.

The following prescriptions illustrate the method of prescribing medicines to be dispensed in cachets:

℞. Sodii salicylatis, ℥j;
Sodii bicarbonatis, ʒiv.
Misce et pone in cachetas No. xxiv.
Sig. One every three hours.

℞. Pulveris glycyrrhizæ compositi, ʒvj.
Pone in cachetas No. xii.
Sig. One at bed-time.

℞. Quininæ sulphatis, Gm. 1.9.
Pone in cachetas No. iii.
Sig. One at 10 A. M. and one at 4 P. M.

℞. Pepsini, ʒiv.
Pone in cachetas No. xii.
Sig. One after meals.

4. CAPSULÆ.
(*Capsules.*)

A most convenient method for administering many solids and liquids having a disagreeable taste is in gelatin capsules. These capsules, which may be either *hard* or *soft*, are of different sizes. The hard capsules are oblong cylindrical shells made in two pieces, so that when one part of the

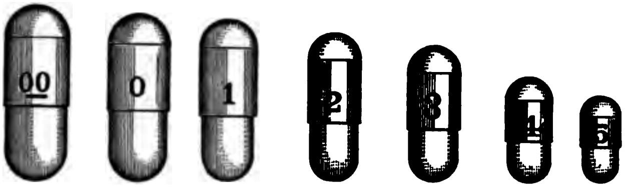

FIG. 2.—Empty Hard Capsules (intended to be swallowed).

shell (known as the *cap*) is fitted over the other, it is closed at both ends. The hard capsules are best suited for administering solids, and are usually so made as to hold from about ½ grain to 10 grains of a light powder. In Figure 2 the quantity of quinine sulphate that can be put into 00 is about 8 grains; in 0, about 6 grains; in 1, about 4 grains; in 2, about 3 grains; in 3, about 2 grains; in 4, about 1½ grains; and in 5, about ¾ of a grain. Soft capsules, which are best suited for oily liquids, are usually globular or egg-shaped, and are made to hold from 3 minims to a fluidrachm.

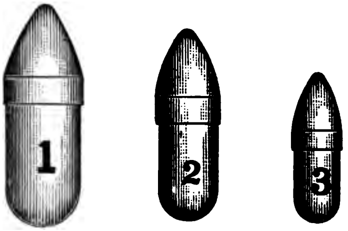

FIG. 3.—Empty Rectal Capsules.

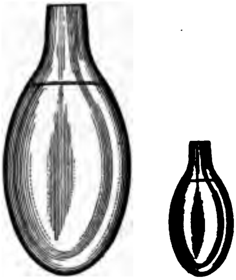

FIG. 4.—Empty Soft Capsules.

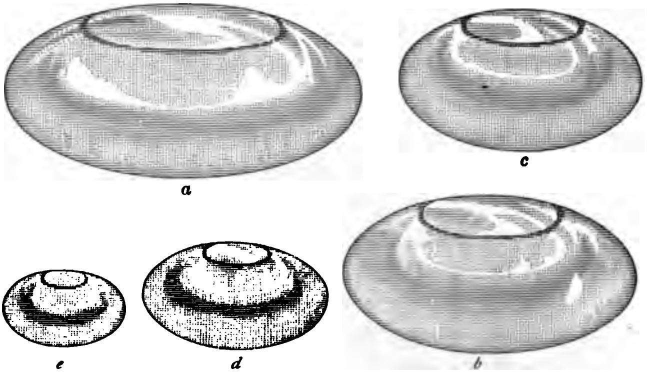

FIG. 5.—Filled Soft Capsules: *a*, four fluidrachms; *b*, two and a half fluidrachms; *c*, one and a half fluidrachms; *d*, fifty minims; *e*, ten minims.

Ready-filled soft capsules, containing castor oil, cod-liver oil, and special formulæ, are now kept by most druggists. The quantity of liquid contained in these capsules may be from 5 minims to half a fluidounce. Empty hard capsules for solids and empty soft capsules for liquids are kept on hand by druggists, and prescriptions calling for medicines to be dispensed in them can be prepared readily. Non-irritating liquids and soft solids may be administered in capsules suitable for introduction into the rectum (Fig. 3). The following prescriptions illustrate the method of writing for medicines in capsules:

℞. Quininæ sulphatis, ʒj.
Pone in capsulas No. xii.
Sig. One every five hours.

℞. Oleoresinæ cubebæ, fʒj;
Copaibæ, fʒij.
Misce et pone in capsulas No. xx.
Sig. One after each meal.

℞. Olei ricini, ʒij.
Pone in capsulam unam.
Sig. Take at once.

5. CATAPLASMATA.

(*Poultices.*)

Poultices are soft solid preparations intended for local use as a means of applying moist heat to localized areas of the body, as counter-irritants, and, occasionally, as a means of obtaining the systemic effect by absorption of the drug from which the poultice is made. There are no poultices official in the U. S. Pharmacopœia, but they may be made at the time they are wanted, under the directions of the physician. Those most largely employed are *mustard* and *spice* poultices.

Mustard Poultice.—Mix 2½ ounces of ground mustard with about 2 or 3 ounces of tepid water, and 2½ ounces of flaxseed meal with about 6 ounces of boiling water; add the mustard paste to the flaxseed-meal paste and thoroughly mix. Spread a piece of paper upon a table, and upon this spread a piece of thick new linen or muslin of the proper size; with a broad knife or spatula spread the poultice upon the cloth, cover this with an old piece of thin linen, fold the paper over the edges of the poultice like a picture-frame, and apply the uncovered side to the surface of the patient's body.

The quantities of the ingredients may be varied to suit the case. Warm vinegar may be substituted for water, and flour for flaxseed meal.

Spice Poultice.—Mix thoroughly equal parts of ground allspice, cloves, cinnamon, nutmeg, and one-half as much ground black pepper as any one of the other powders. Transfer the powders in the dry state to a flannel bag of the proper size; sew up the mouth of the bag; distribute the powder evenly in the bag by shaking, so that the poultice will be of even thickness; quilt the bag through from side to side and lengthwise, so as to keep the powder from all collecting at one place; lastly, moisten one side of the poultice with warm alcohol, whiskey, or vinegar, and apply the dry side to the body.

6. CERATA.

(*Cerates.*)

Cerates are unctuous solid preparations containing sufficient wax to prevent them from melting at the ordinary temperature of the body. *Ceratum* is made up of white wax, 30 parts, and lard, 70 parts; the other five cerates are combinations of wax and lard with some medicating substance. They are intended for external application, and are of such consistency that at the ordinary temperature they may easily be spread upon muslin or linen, and yet be sufficiently hard not to run when applied to the surface of the body. When kept long they frequently become rancid. If such a cerate is dispensed by the pharmacist, it should be rejected by the physician. Camphor cerate should always be prepared freshly when wanted. The following are the *official cerates:*

Ceratum,
Ceratum Camphoræ,
Ceratum Cantharidis (*Blistering Cerate*),
Ceratum Cetacei,
Ceratum Plumbi Subacetatis (*Goulard's Cerate*),
Ceratum Resinæ (*Basilicon Ointment*).

The method of employing cerates in prescriptions is—

℞. Acidi salicylici,	gr. x;
Cerati,	ʒij.—Misce.

Sig. Apply to the corn at night.

℞. Cerati cantharidis,	ʒij.

Sig. Spread upon a piece of new unbleached muslin 2 by 2 inches, and apply to the left side of the spine.

℞. Liquoris plumbi subacetatis,	Gm. 20;
Cerati camphoræ,	Gm. 80.—Misce.

Sig. Apply to the hands at bed-time.

7. CHARTÆ.

(*Papers.*)

"Papers" are pieces of absorbent paper that have been treated with medicinal substances. Only two are official: Potassium Nitrate paper, intended to be burned and the fumes inhaled for the relief of asthmatic attacks; and Mustard paper, intended to be dipped into warm (not hot) water and applied to the skin as a rubefacient. In prescriptions papers are ordered by the square inch, thus:

℞. Chartæ sinapis,	4″ x 6″.

Sig. Dip into warm water and apply to the abdomen.

℞. Chartæ potassii nitratis, 10″ x 12″.
Sig. Cut into narrow strips, burn, and inhale the fumes.

The *official papers* are Charta Potassii Nitratis and Charta Sinapis.

8. CONFECTIONES.
(*Confections.*)

Confections, conserves, or electuaries are soft, pasty solids consisting of drugs mixed with sugar or honey. This class of preparations furnishes a means of administering a number of drugs in an agreeable form. Confection of rose is used almost exclusively as an excipient, but as it contains tannin, it should not enter into pill-masses containing ferric salts. The *official confections* are—

	Dose.	
Confectio Rosæ,	Excipient;	
Confectio Sennæ,	7.8 Gm.,	ʒ 2.

The following prescriptions are illustrative of confections:

℞. Sodii arsenatis, gr. ij;
Extracti nucis vomicæ, gr. xij;
Confectionis rosæ, ʒj.
Misce et fiant pilulæ No. xxiv.
Sig. One after each meal.

℞. Confectionis sennæ, ℥j.
Sig. Teaspoonful at bed-time.

℞. Sulphuris sublimati, ℥ij;
Potassii bitartratis, ʒiv;
Syrupi aurantii, ℥ij;
Tragacanthæ pulveratæ, gr. x.
Misce et fiat confectio.
Sig. Take as much at bed-time as can be placed in a teaspoon.

9. COLLODIA.

(Collodions.)

Collodions, which are solutions of pyroxylin (gun-cotton) in ether and alcohol, are intended for external applications. Cantharidal collodion is used to blister the skin; all the others are used as dressings. Collodions are to be applied by means of a small brush; the ether and alcohol evaporate and leave the surface covered by a thin film. Flexible collodion is suited to abrasions of joints, etc. The following are the four *official collodions:*

Collodium,
Collodium Cantharidatum (*Blistering Collodion*).
Collodium Flexile,
Collodium Stypticum.

Two prescriptions containing collodions are:

℞. Collodii Cantharidati,	fʒiv.

Sig. Paint on the chest a spot the size of a quarter-dollar.

℞. Acidi salicylici,	gr. xv;
Collodii,	ʒiv.—Misce.

Sig. Apply to corn each night and morning.

10. DECOCTA.

(Decoctions.)

Decoctions are liquid preparations made by *boiling* vegetable substances in water and then straining. Like infusions, they decompose if kept for any length of time, and should be made freshly when wanted. The United States Pharmacopœia gives the following general formula for decoctions when the strength is not specified by the physician:

"The substance, coarsely comminuted,	50 Gm;
Water, a sufficient quantity to make	1000 C.c.

Put the substance in a suitable vessel provided with a cover;

pour upon it one thousand cubic centimetres of cold water; cover it well, and boil for fifteen minutes; then let it cool to about 40° C. (104° F.), express, strain the expressed liquid, and pass enough cold water through the strainer to make the product measure one thousand cubic centimetres.

"*Caution:* The strength of the decoctions of energetic or powerful substances should be specially prescribed by the physician."

As we have preparations of more concentrated strength that can be given in smaller quantity to obtain the same effect, decoctions are much more rarely used than formerly. Only two decoctions are now *official:*

	Dose.	
Decoctum Cetrariæ,	60.00–118.00 C.c.,	2–4 f℥;
Decoctum Sarsaparillæ Compositum,	118.00–177.00 C.c.,	4–6 f℥.

The following prescriptions are illustrative of decoctions:

℞. Pilocarpi,	Gm. 4.0;
Aquæ,	q. s. ad C.c. 180.00.

Fiat decoctum.
Sig. Take at one dose.

℞. Potassii acetatis,	ʒvj;
Infusi digitalis,	f℥iij;
Decocti scoparii,	f℥ij;
Syrupi aurantii,	q. s. ad ℥vj.

Misce et fiat solutio.
Sig. Tablespoonful in water every six hours.

11. ELIXIRIA.

(*Elixirs.*)

An elixir is a sweetened, aromatic, alcoholic liquid. Only two elixirs are official, although a number are used. They are made sweet and aromatic to disguise the taste of other remedies. Aromatic elixir is an excellent vehicle in which to administer most tinctures and fluid extracts (except those that are highly resinous); being strongly alcoholic, precipitation does not occur, as is the case when fluid extracts or tinctures are added to aqueous liquids. The *official elixirs* are—

	Dose.	
Elixir Aromaticum,	3.7–15.00 C.c.,	1–4 fʒ;
Elixir Phosphori,	1.8– 3.75 C.c.,	½–1 fʒ.

The following are prescriptions illustrative of elixirs:

℞. Tincturæ belladonnæ foliorum, ♏xxxij;
Elixiris aromatici, ℥ij.—Misce.
Sig. Teaspoonful every two hours.

℞. Spiritus chloroformi, fʒiv;
Tincturæ lavandulæ compositæ, fʒij;
Elixiris aromatici, q. s. ad f℥ij.—Misce.
Sig. Teaspoonful in water every hour while in pain.

℞. Paraldehydi, fʒiv;
Alcoholis, f℥j;
Aquæ aurantii florum, fʒiv;
Syrupi, f℥j;
Aquæ, q. s. ad f℥iv.—Misce.
Fiat elixir.
Sig. Teaspoonful in water every four hours.

12. EMPLASTRA.

(*Plasters.*)

Plasters are a class of solid preparations intended for external use, and are of such consistency that when by the aid of heat, they are spread upon muslin, buck-skin, chamois-skin, sheep-skin, etc., and applied to the body, they do not melt and run, but adhere to the skin. Isinglass-plaster (court plaster) is the only one that must be moistened to make it adhere to the skin. Plasters are used to protect cuts and raw surfaces, to hold cut surfaces together, for local effect upon the skin to redden or blister it, and also for the purpose of producing systemic effects. Ready-spread plasters are more largely used than the official ones, and are prescribed by the square inch. The *official plasters* are—

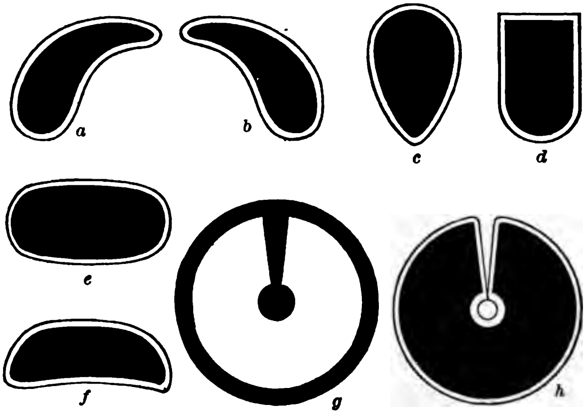

Fig. 6.—Shapes of Plasters: *a*, for left ear; *b*, for right ear; *c*, for chest; *d*, for shoulder; *e*, for back; *f*, for side; *g*, pattern for breast-plate; and *h*, plaster for breast.

Emplastrum Ammoniaci cum Hydrargyro;
Emplastrum Arnicæ;
Emplastrum Belladonnæ;
Emplastrum Capsici;
Emplastrum Ferri (*Strengthening Plaster*);
Emplastrum Hydrargyri;
Emplastrum Ichthyocollæ (*Court Plaster*);
Emplastrum Opii;
Emplastrum Picis Burgundicæ;
Emplastrum Picis Cantharidatum (*Warming Plaster*);
Emplastrum Plumbi (*Diachylon Plaster*);
Emplastrum Resinæ (*Adhesive Plaster*);
Emplastrum Saponis.

The following are examples of plasters:

℞. Cerati cantharidis, q. s.
Fiat emplastrum 1″ x 1″.
Sig. Apply, and allow it to remain for six hours.

℞. Emplastri hydrargyri, 4″ x 6″.
Sig. Apply over abdomen, and allow it to remain.

℞. Emplastri hydrargyri, ʒij;
Emplastri plumbi, ʒij;
Emplastri belladonnæ, ʒss.—Misce.
Fiat emplastrum 2″ x 4″.
Sig. Apply over inflamed gland.

℞. Emplastri picis cantharidati, ℥j.
Fiat emplastrum 6″ x 6″.
Sig. Apply over region of liver.

13. EMULSA OR EMULSIONES.

(*Emulsions.*)

Emulsions are liquid preparations in which oils or resins are suspended in water by means of a mucilaginous substance. Acacia, mucilage of acacia, mucilage of tragacanth, and yolk of eggs are the substances most frequently employed, although solutions of potassa and of pancreatin aid in the emulsification of oils and often enter into the formulæ for emulsions. Emulsions made with egg soon decompose. Acids destroy emulsions made with alkalies. Small quantities of tinctures and fluid extracts may be added to emulsions, but alcoholic liquids, except in small amounts, should not be added to emulsions made with egg or with gums, as they cause precipitation of the two latter substances, and consequently destroy the emulsion. With gum-resins, like asafetida, ammoniac, etc., emulsions may be made by simply rubbing them to a smooth mixture with water.

The theory of emulsification is that by agitating oil or resin with mucilage it is broken up into a great number of minute particles or globules, each of which becomes surrounded by a thin film of mucilage, which holds the particles or globules suspended in water. Milk is a good example of an emulsion: the oil (butter) is surrounded by casein (the emulsifying agent), which holds it suspended in the water. Emulsions should be freely miscible with water in all proportions; if they are not freely miscible, the emulsion has been made imperfectly. Emulsions are said to be "cracked" when the oil and water separate upon standing.

No exact amount of emulsifying agent can be stated for emulsifying a given quantity of oil or of resins, as the quantity varies with different oils. The fixed oils require less mucilage than the volatile oils. The fixed oils require from 1 to 2 drachms of powdered acacia to emulsify an ounce of oil, and the volatile oils 2 to 4 drachms of powdered acacia to the ounce of oil. By mixing volatile oils with fixed oils the volatile oil is more easily emulsified. A skilled pharmacist prides himself upon his ability to make good emulsions, and the quantity of emulsifying agent may safely be left to him; thus:

℞. Olei terebinthinæ, fʒij;
Acaciæ, q. s.;
Sacchari, ʒij;
Aquæ, q. s. ad f℥iij.
Misce et fiat emulsum.
Sig. One teaspoonful in water every two hours.

The *official emulsions* are:

	Dose.	
Emulsum Ammoniaci,	15. –30. C.c.,	4–8 fʒ.
Emulsum Amygdalæ,	Ad libitum.	
Emulsum Asafœtidæ,	15. –30. C.c.,	4–8 fʒ.
Emulsum Chloroformi,	3.7–15. C.c.,	1–4 fʒ.

The following prescriptions are illustrative of emulsions:

℞. Olei morrhuæ,	f℥iv;
Acaciæ,	℥j;
Aquæ,	q. s. ad f℥viij.

Misce et fiat emulsum.

Sig. Two teaspoonfuls in water two hours after each meal.

℞. Copaibæ,	fʒiij;
Pancreatini,	ʒij;
Liquoris potassæ,	fʒj;
Spiritus ætheris nitrosi,	fʒij;
Acaciæ,	ʒij;
Aquæ,	q. s. ad f℥viij.

Misce et fiat emulsum.

Sig. One tablespoonful in water after meals.

℞. Emulsionis olei morrhuæ (50%), f℥viij.

Sig. Two teaspoonfuls in water after each meal.

℞. Guaiaci resinæ,	ʒj;
Mucilaginis acaciæ,	q. s.;
Syrupi,	fʒij;
Aquæ,	q. s. ad f℥ij.

Misce et fiat emulsum.

Sig. Teaspoonful in water after meals.

℞. Syrupi picis liquidæ,	fʒiv;
Emulsi amygdalæ,	f℥iss.—Misce.

Sig. Teaspoonful every two hours.

℞. Extracti valerianæ fluidi,	fʒij;
Emulsi asafœtidæ,	℥iiiss.—Misce.

Sig. Shake. One tablespoonful every two hours.

14. ENEMATA.

(*Clysters.*)

An enema, clyster, or lavament is a liquid intended for injection into the rectum by means of a syringe. There are no official enemata in the U. S. Pharmacopœia: the following, with the exception of that of tobacco, are official in the British Pharmacopœia, with the quantity ordinarily administered per rectum:

	Dose.	
Enema Aloes,	295 C.c.,	10 f℥.
Enema Asafœtida,	118 C.c.,	4 f℥.
Enema Magnesii Sulphatis,	473 C.c.,	16 f℥.
Enema Opii,	60 C.c.,	2 f℥.
Enema Tabaci,	236 C.c.,	8 f℥.
Enema Terebinthinæ,	473 C.c.,	16 f℥.

Clysters are rarely written for on prescription, but there is no reason why they should not be ordered from the druggist if it be so desired.

The quantity of Aloes in enema of Aloes is 40 grains; of Asafœtida in enema of Asafœtida, 30 grains; of Magnesium Sulphate in enema of Magnesium Sulphate, 1 ounce; of Tincture of Opium in enema of Opium, ½ fluidrachm; of Tobacco-leaf in enema of Tobacco, 20 grains; of Oil of Turpentine in enema of Turpentine, 1 fluidounce.

The formulæ for the two that are occasionally prepared by the physician are as follows:

Enema of Magnesium Sulphate.

Magnesium sulphate,	℥j;
Olive oil,	f℥j;
Mucilage of starch,	f℥xv.

Dissolve the magnesium sulphate in the mucilage and add the oil.

Enema of Turpentine.

Oil of turpentine,	f℥j;
Mucilage of starch,	f℥xv.

Mix and shake well.

15. EXTRACTA.

(*Extracts.*)

Extracts are solid preparations made by extracting the active ingredients of vegetable substances by the process of percolation or of maceration, and then by evaporating at a low temperature this solution to a soft mass or to dryness.

Most of the extracts are of *pilular* consistency, but those of *Aloe*, *Glycyrrhiza*, *Hæmatoxylon*, *Krameria*, *Nux Vomica*, *Opium*, *Colocynth*, and *Compound Extract of Colocynth* are dry *powders*. Some of the soft extracts have a little glycerin added to keep them from becoming dry and hard. In many of the stores all the extracts are kept in powdered form and are dispensed for the official article. This practice cannot be too strongly condemned, as the heat required to reduce them to dryness destroys the value of many extracts. When official preparations are prescribed the pharmacist should dispense no other than those made by the pharmacopœial process. "Aqueous" and "alcoholic" extracts are not liquids, but they are solid preparations in which water or alcohol has been used to extract the active ingredients from the drug, the liquid then being evaporated. "Aqueous extracts" are soluble in water, and "alcoholic extracts" dissolve in alcohol. The extracts are especially adapted for dispensing in the form of pills, as they are mostly energetic remedies; the doses are small, and the extracts are of such consistency that they can readily be made into pills without the addition of any excipient. Glycerine is sometimes added to the menstruum to preserve the extract. The following are *official extracts*:

	Dose.	
Extractum Aconiti,	.01 – .016 Gm.,	$\frac{1}{6}$– $\frac{1}{4}$ gr.
Extractum Aloes,	.032– .32 Gm.,	$\frac{1}{2}$– 5 gr.
Extractum Arnicæ Radicis,	.20 – .32 Gm.,	3– 5 gr.
Extractum Belladonnæ Foliorum Alcoholicum,	.010– .016 Gm.,	$\frac{1}{6}$– $\frac{1}{4}$ gr.

	Dose.		
Extractum Cannabis Indicæ,	.016– .032	Gm.,	$\frac{1}{4}$– $\frac{1}{2}$ gr.
Extractum Cimicifugæ,	.065– .32	Gm.,	1– 5 gr.
Extractum Cinchonæ,	.32 – .65	Gm.,	5– 10 gr.
Extractum Colchici Radicis,	.032– .13	Gm.,	$\frac{1}{2}$– 2 gr.
Extractum Colocynthidis,	.130– .32	Gm.,	2– 5 gr.
Extractum Colocynthidis Compositum,	.32 –1.29	Gm.,	5– 20 gr.
Extractum Conii,	.032– .065	Gm.,	$\frac{1}{2}$– 1 gr.
Extractum Digitalis,	.010– .016	Gm.,	$\frac{1}{6}$– $\frac{1}{4}$ gr.
Extractum Ergotæ,	.065–1.29	Gm.,	1– 20 gr.
Extractum Euonymi,	.195– .65	Gm.,	3– 10 gr.
Extractum Gentianæ,	.065– .65	Gm.,	1– 10 gr.
Extractum Glycyrrhizæ,	.32 –6.5	Gm.,	5–100 gr.
Extractum Glycyrrhizæ Purum,	.32 –6.5	Gm.,	5–100 gr.
Extractum Hæmatoxyli,	.52 –1.9	Gm.,	8– 30 gr.
Extractum Hyoscyami,	.032– .19	Gm.,	$\frac{1}{2}$– 3 gr.
Extractum Iridis,	.13 – .26	Gm.,	2– 4 gr.
Extractum Jalapæ,	.32 – .65	Gm.,	5– 10 gr.
Extractum Juglandis,	.32 – .65	Gm.,	5– 10 gr.
Extractum Krameriæ,	.32 – .65	Gm.,	5– 10 gr.
Extractum Leptandræ,	.065– .52	Gm.,	1– 8 gr.
Extractum Nucis Vomicæ,	.01 – .032	Gm.,	$\frac{1}{6}$– $\frac{1}{2}$ gr.
Extractum Opii,	.016– .065	Gm.,	$\frac{1}{4}$– 1 gr.
Extractum Physostigmatis,	.004– .008	Gm.,	$\frac{1}{16}$– $\frac{1}{8}$ gr.
Extractum Podophylli,	.032– .32	Gm.,	$\frac{1}{2}$– 5 gr.
Extractum Quassiæ,	.065– .195	Gm.,	1– 3 gr.
Extractum Rhei,	.32 – .65	Gm.,	5– 10 gr.
Extractum Stramonii Seminis,	.010– .032	Gm.,	$\frac{1}{6}$– $\frac{1}{2}$ gr.
Extractum Taraxaci,	.32 –1.95	Gm.,	5– 30 gr.
Extractum Uvæ Ursi,	.065– .32	Gm.,	1– 5 gr.

The dry extracts require a small quantity of liquid to develop their adhesive properties. Extracts which have very slight medicinal value when used in small quantities, such as gentian, taraxacum, and pure extract of glycyrrhiza, are largely used as excipients in pill-masses containing active remedies.

℞. Iodoformi,	ʒij ;
Extracti belladonnæ foliorum alcoholici,	gr. xl ;
Alcoholis diluti,	q. s. ;
Adepis benzoinati, q. s. ad	f℥j.—Misce.

Fiat unguentum.
Sig. Apply every three hours.

℞. Extracti opii,	gr. j ;
Ipecacuanhæ pulveris,	gr. iij ;
Sacchari lactis,	gr. xxx.

Misce et in chartulas No. vi divide.
Sig. One at bed-time.

℞. Extracti belladonnæ foliorum alcoholici,	ʒj ;
Emplastri resinæ,	ʒij ;
Emplastri saponis,	ʒij.—Misce.

Fiat emplastrum 2″ x 4″.
Sig. Apply to left side of chest.

℞. Extracti krameriæ,	gr. x ;
Sacchari,	ʒiss ;
Tragacanthæ,	gr. iv ;
Aquæ aurantii florum,	q. s.

Misce et in trochiscos No. x divide.
Sig. Dissolve one on the tongue every two hours.

℞. Aloini,	gr. v ;
Extracti nucis vomicæ,	gr. iv ;
Extracti physostigmatis,	gr. j ;
Extracti hyoscyami,	gr. vj ;
Syrupi acaciæ,	q. s.

Misce et in pilulas No. xv divide.
Sig. One at bed-time.

15. EXTRACTA FLUIDA.

(*Fluid Extracts.*)

Fluid extracts are liquid preparations of uniform and definite strengths, made by a process in which each cubic centimetre contains the active ingredients of 1 gramme of the crude drug from which it is made. Most fluid extracts are prepared about as follows:

Of the selected drug, in fine powder, take 1000 grammes; moisten it with the menstruum, and pack it into a cylindrical percolator; then pour on sufficient menstruum to saturate thoroughly and slightly cover the drug. As soon as the menstruum begins to drop from the lower orifice close the latter with a cork, and, covering the top of the percolator, allow the drug to macerate for a specified time (usually from twenty-four to forty-eight hours). Then allow the percolation to proceed by removing the cork and adding more of the menstruum. When from 700 to 900 C.c. of the fluid have come through the percolator, set this quantity aside, and, adding the menstruum gradually, continue the percolation until the drug is exhausted. Evaporate all of this last portion to a soft extract, dissolve in the first portion, and add sufficient of the menstruum to make the finished product measure 1000 cubic centimetres. It will be seen from the above that by beginning with 1000 Gm. of the crude drug there is made 1000 C.c. of fluid extract.

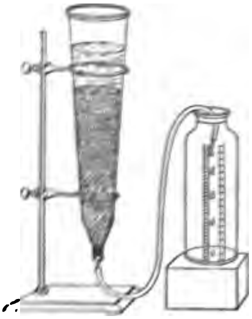

Fig. 7. Method of Percolation.

The menstruum is either alcohol, alcohol and water, or alcohol, water, and glycerin, and in exceptional cases water only. Those fluid extracts in which water is used as a menstruum have some alcohol added to preserve the preparation.

This is a popular class of preparations, as they bear a uniform relation to the crude drug, and the doses are small.

As a rule, the fluid extracts (especially those containing resinous substances) precipitate upon the addition of water. Very good vehicles in which to prescribe them are aromatic elixir, aromatic fluid extract, aromatic spirits, and, in some cases, syrup. Eighty-eight fluid extracts are *official*—namely:

	Dose.	
Extractum Aconiti Fluidum,	.03– .12 C.c.,	½– 2 ♏.
Extractum Apocyni Fluidum,	.3 –1.8 C.c.,	5–30 ♏.
Extractum Arnicæ Radicis Fluidum,	.3 – .6 C.c.,	5–10 ♏.
Extractum Aromaticum Fluidum,	.6 –3.7 C.c.,	10–60 ♏.
Extractum Asclepiadis Fluidum,	1.2 –3.7 C.c.,	20–60 ♏.
Extractum Aspidospermatis Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Aurantii Amari Fluidum,	1. –1.8 C.c.,	16–30 ♏.
Extractum Belladonnæ Radicis Fluidum,	.06– .12 C.c.,	1– 2 ♏.
Extractum Buchu Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Calami Fluidum,	.3 –1.8 C.c.,	5–30 ♏.
Extractum Calumbæ Fluidum,	1. –3.7 C.c.,	16–60 ♏.
Extractum Cannabis Indicæ Fluidum,	.12–1.2 C.c.,	2–20 ♏.
Extractum Capsici Fluidum,	.06– .18 C.c.,	1– 3 ♏.
Extractum Castaneæ Fluidum,	3.7 –7.5 C.c.,	1– 2 fʒ.
Extractum Chimaphilæ Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Chiratæ Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Cimicifugæ Fluidum,	.6 –1.8 C.c.,	10–30 ♏.
Extractum Cinchonæ Fluidum,	1. –1.8 C.c.,	16–30 ♏.
Extractum Cocæ Fluidum,	1.8 –7.5 C.c.,	½– 2 fʒ.

	Dose.			
Extractum Colchici Radicis Fluidum,	.12–	.24	C.c.,	2– 4 ♏.
Extractum Colchici Seminis Fluidum,	.12–	.3	C.c.,	2– 5 ♏.
Extractum Conii Fluidum,	.12–	.37	C.c.,	2– 6 ♏.
Extractum Convallariæ Fluidum,	.24–	.5	C.c.,	4– 8 ♏.
Extractum Cubebæ Fluidum,	.6 –	3.7	C.c.,	10–60 ♏.
Extractum Cusso Fluidum,	7.5–15.		C.c.,	2– 4 f℥.
Extractum Cypripedii Fluidum,	.3 –	1.8	C.c.,	5–30 ♏.
Extractum Digitalis Fluidum,	.06–	.12	C.c.,	1– 2 ♏.
Extractum Dulcamaræ Fluidum,	1.8 –	3.7	C.c.,	½– 1 f℥.
Extractum Ergotæ Fluidum,	1.8 –	3.7	C.c.,	½– 1 f℥.
Extractum Eriodictyi Fluidum,	1. –	3.7	C.c.,	16–60 ♏.
Extractum Eucalypti Fluidum,	.6 –	3.7	C.c.,	10–60 ♏.
Extractum Eupatorii Fluidum,	1.8 –	3.7	C.c.,	½– 1 f℥.
Extractum Frangulæ Fluidum,	.6 –	1.8	C.c.,	10–30 ♏.
Extractum Gelsemii Fluidum,	.12–	.6	C.c.,	2–10 ♏.
Extractum Gentianæ Fluidum,	1.8 –	3.7	C.c.,	½– 1 f℥.
Extractum Geranii Fluidum,	1.8 –	3.7	C.c.,	½– 1 f℥.
Extractum Glycyrrhizæ Fluidum,	3.7 –	7.5	C.c.,	1– 2 f℥.
Extractum Gossypii Radicis Fluidum,	1.8 –	3.7	C.c.,	½– 1 f℥.
Extractum Grindeliæ Fluidum,	1.8 –	3.7	C.c.,	½– 1 f℥.
Extractum Guaranæ Fluidum,	3.7 –	7.5	C.c.,	1– 2 f℥.
Extractum Hamamelidis Fluidum,	1.8 –	3.7	C.c.,	½– 1 f℥.
Extractum Hydrastis Fluidum,	1.8 –	3.7	C.c.,	½– 1 f℥.
Extractum Hyoscyami Fluidum,	.3 –	1.8	C.c.,	5–30 ♏.
Extractum Ipecacuanhæ Fluidum (emetic),	1. –	2.	C.c.,	16–32 ♏.
Extractum Ipecacuanhæ Fluidum (expectorant),	.06–	.12	C.c.,	1– 2 ♏.
Extractum Iridis Fluidum,	.3 –	.6	C.c.,	5–10 ♏.
Extractum Krameriæ Fluidum,	.6 –	1.8	C.c.,	10–30 ♏.
Extractum Lappæ Fluidum,	1.8 –	3.7	C.c.,	½– 1 f℥.

	Dose.	
Extractum Leptandræ Fluidum,	.3 –1.8 C.c.,	5–30 ♏.
Extractum Lobeliæ Fluidum (emetic),	1. –3.7 C.c.,	16–60 ♏.
Extractum Lupulini Fluidum,	.6 –1. C.c.,	10–16 ♏.
Extractum Matico Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Menispermi Fluidum,	.3 –1.8 C.c.,	5–30 ♏.
Extractum Mezerei Fluidum,	used externally.	
Extractum Nucis Vomicæ Fluidum,	.06– .3 C.c.,	1– 5 ♏.
Extractum Pareiræ Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Phytolaccæ Radicis Fluidum,	.06–1.8 C.c.,	1–30 ♏.
Extractum Pilocarpi Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Podophylli Fluidum,	.12–1.2 C.c.,	2–20 ♏.
Extractum Pruni Virginianæ Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Quassiæ Fluidum,	.3 – .6 C.c.,	5–10 ♏.
Extractum Rhamni Purshianæ Fluidum,	1. –1.8 C.c.,	16–30 ♏.
Extractum Rhei Fluidum,	.6 –1.8 C.c.,	10–30 ♏.
Extractum Rhois Glabræ Fluidum,	.6 –1.8 C.c.,	10–30 ♏.
Extractum Rosæ Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Rubi Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Rumicis Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Sabinæ Fluidum,	.3 –1. C.c.,	5–16 ♏.
Extractum Sanguinariæ Fluidum,	.06– .3 C.c.,	1– 5 ♏.
Extractum Sarsaparillæ Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Sarsaparillæ Fluidum Compositum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Scillæ Fluidum,	.06– .3 C.c.,	1– 5 ♏.
Extractum Scoparii Fluidum,	.3 –1.2 C.c.,	5–20 ♏.
Extractum Scutellariæ Fluidum,	1.8 –3.7 C.c.,	½– 1 fʒ.
Extractum Senegæ Fluidum,	.6 –1.2 C.c.,	10–20 ♏.

	Dose.		
Extractum Sennæ Fluidum,	3.7 –7.5	C.c.,	1– 2 fʒ.
Extractum Serpentariæ Fluidum,	.6 –1.8	C.c.,	10–30 ♏.
Extractum Spigeliæ Fluidum,	3.7 –7.5	C.c.,	1– 2 fʒ.
Extractum Stillingiæ Fluidum,	.6 –3.7	C.c.,	10–60 ♏.
Extractum Stramonii Seminis Fluidum,	.06– .12	C.c.,	1– 2 ♏.
Extractum Taraxaci Fluidum,	3.7 –7.5	C.c.,	1– 2 fʒ.
Extractum Tritici Fluidum,	7.5 – 15.	C.c.,	2– 4 fʒ.
Extractum Uvæ Ursi Fluidum,	3.7 – 15.	C.c.,	1– 4 fʒ.
Extractum Valerianæ Fluidum,	1.8 –3.7	C.c.,	½– 1 fʒ.
Extractum Veratri Viridis Fluidum,	.06– .18	C.c.,	1– 3 ♏.
Extractum Viburni Opuli Fluidum,	3.7 –7.5	C.c.,	1– 2 fʒ.
Extractum Viburni Prunifolii Fluidum,	3.7 –7.5	C.c.,	1– 2 fʒ.
Extractum Xanthoxyli Fluidum,	.6 –1.8	C.c.,	10–30 ♏.
Extractum Zingiberis Fluidum,	.6 –1.8	C.c.,	10–30 ♏.

Formulæ containing Fluid Extracts.

℞. Extracti cannabis indicæ fluidi, fʒij ;
Extracti gelsemii fluidi, fʒij.—Misce.
Sig. Ten drops every two hours.

℞. Extracti rhamni purshianæ fluidi,
Extracti glycyrrhizæ fluidi, *āā.* f℥j.—Misce.
Sig. Teaspoonful at bed-time.

℞. Extracti ipecacuanhæ fluidi, fʒij ;
Syrupi, q. s. ad f℥j.—Misce.
Sig. Teaspoonful every fifteen minutes until vomiting is produced.

℞. Extracti viburni opuli fluidi,
Extracti viburni prunifolii fluidi, *āā*. f℥j;
Chloralis, ʒij;
Extracti aromatici fluidi, q. s. ad f℥iv.—Misce.
Sig. Two teaspoonfuls in hot water every hour until relieved.

℞. Extracti scillæ fluidi, fʒj;
Extracti digitalis fluidi, fʒiv;
Elixiris aromatici, q. s. ad f℥iij.—Misce.
Sig. Teaspoonful every eight hours.

℞. Extracti belladonnæ radicis fluidi, fʒiv.
Sig. Two drops every two hours.

℞. Extracti cannabis indicæ fluidi, fʒj;
Spiritus chloroformi, fʒij;
Acidi hydrocyanici diluti, fʒss;
Acaciæ, q. s.;
Aquæ, q. s. ad f℥ij.—Misce.
Fiat emulsum.
Sig. Teaspoonful in water every two hours until pain is relieved.

17. GLYCERITA.

(*Glycerites.*)

The glycerites are solutions of medicinal substances in glycerin. They are all used internally, except glycerite of boroglycerin, and all are adapted for external application. Glycerite of yolk of egg, which should be freshly made when wanted, is frequently used for making emulsions of cod-liver oil and as a vehicle for other substances. Glycerite of starch is a good excipient for making many pill-masses. Six glycerita are *official*—namely:

	Dose.	
Glyceritum Acidi Carbolici,	.12– .6 C.c.,	2–10 ♏.
Glyceritum Acidi Tannici,	.6 –3.7 C.c.,	10–60 ♏.
Glyceritum Amyli (excipient and locally).		
Glyceritum Boroclycerini (locally).		
Glyceritum Hydrastis,	3.7 –7.5 C.c.,	1–2 fʒ.
Glyceritum Vitelli,	3.7 –7.5 C.c.,	1–2 fʒ.

℞. Glyceriti boroclycerini, f℥j.
Sig. "For sore mouth." Apply well to the mouth every three hours.

℞. Quininæ sulphatis, gr. xxxvj;
Glyceriti amyli, q. s.
Misce et fiant pilulæ No. xii.
Sig. One every four hours.

℞. Olei morrhuæ, f℥iij;
Vini albi, f℥j;
Glyceriti vitelli, q. s. ad f℥viij.
Fiat emulsum.
Sig. Tablespoonful after meals.

18. INFUSA.

(*Infusions.*)

Infusions are liquid preparations made by pouring hot or cold water over vegetable substances, allowing the mixture to stand for several hours, and then straining it. Like all aqueous liquids, infusions do not keep well, and, as a rule, they should be made new when wanted. The general formula for infusions, when the quantity is not stated, is given as follows by the *U. S. Pharmacopœia* of 1890:

"The substance, coarsely comminuted, 50 Gm.;
Boiling water, 1000 C.c.;
Water, sufficient quantity to make one thousand cubic centimetres of infusion.

"Put the substance in a suitable vessel provided with a cover, pour upon it the boiling water; cover the vessel tightly, and let it stand for half an hour. Then strain, and pass enough water through the strainer to make the infusion measure one thousand (1000) cubic centimetres.

"*Caution.* The strength of infusions of energetic or powerful substances should be specially prescribed by the physician."

Another objection to infusions is that the dose is large. The *official infusions* are as follows:

	Dose.	
Infusum Cinchonæ,	15.00– 60.00 C.c.,	4–16 fʒ.
Infusum Digitalis,	3.7 – 15.00 C.c.,	1– 4 fʒ.
Infusum Pruni Virginianæ,	15.00– 30.00 C.c.,	4– 8 fʒ.
Infusum Sennæ Compositum (*Black Draught*),	60.00–240.00 C.c.,	2– 8 f℥.

℞. Potassii acetatis,		Gm.	30.00;
Spiritus ætheris nitrosi,		C.c.	45.00;
Infusi digitalis,		C.c.	150.00;
Aquæ,	q. s. ad	C.c.	300.00.—Misce.

Fiat solutio.

Sig. Two tablespoonfuls every four hours.

19. LINIMENTA.

(*Liniments.*)

Liniments (with the exception of turpentine liniment, which is a semi-solid) are liquid preparations intended for external application. Lime and turpentine liniments are used for burns, and soft-soap liniment is used in various skin diseases, whereas all other liniments are to be applied by rubbing; the friction employed in applying the liniment probably does more to relieve the condition than the medicament.

The mistake is sometimes made of saturating a piece of flannel with liniment of chloroform or of ammonia and binding it to the skin: this should not be done, as it results in a severe blister or in painful sloughing. The following is a list of *official liniments:*

Linimentum Ammoniæ (*Volatile Liniment*);
Linimentum Belladonnæ;
Linimentum Calcis (*Carron Oil*);
Linimentum Camphoræ;
Linimentum Chloroformi;
Linimentum Saponis;
Linimentum Saponis Mollis;
Linimentum Sinapis Compositum;
Linimentum Terebinthinæ.

Soap liniment is largely used as a vehicle for extemporaneous liniments. When prescribing liniments it is best to have a label of "Poison" or "External use only" placed upon the bottle, in addition to the other directions.

℞. Tincturæ aconiti, f℥j;
Chloroformi, f℥j;
Linimenti saponis, f℥vj.—Misce.
Sig. "For external use only." Apply with rubbing night and morning.

℞. Extracti arnicæ radicis fluidi, f℥j;
Linimenti saponis, f℥vij.—Misce.
Sig. "Poison." Apply well every three hours.

℞. Acidi acetici, f℥j;
Olei terebinthinæ,
Linimenti camphoræ, *āā.* f℥iss.—Misce.
Sig. "Liniment." Apply to knee by rubbing.

℞.	Olei terebinthinæ,	fʒvj;
	Tincturæ opii,	fʒvj;
	Camphoræ,	fʒij;
	Olei gossypii seminis,	q. s. ad f℥vj.—Misce.

Sig. "Poison." Shake well and apply to joints night and morning.

20. Liquores.

(*Solutions.*)

As is generally understood, a solution is a liquid preparation in which one or more substances are *completely dissolved.* When a liquid has dissolved in it all of a substance it will retain, it is said to be a *saturated solution*, and if more of the substance is then added, it becomes a *supersaturated solution.* In writing for extemporaneous solutions some idea must be had of the solubility of the substance in the liquid in which it is desired to be dissolved.

It is impossible for the physician to bear in mind the table of solubilities, but he soon becomes sufficiently familiar with the solubility of the more ordinary substances to prescribe them with confidence. A table of solubilities is given on page 88. The most generally used solvents are water and alcohol, although glycerin, ether, chloroform, and oils are frequently employed in this capacity. It must not be forgotten that alcohol is a good solvent for oils and resins, but that it precipitates gum and albumin; and that water is a good solvent for gums and albumin, but that it precipitates oils and resins from alcoholic solution. It is a very good plan to add a small quantity of glycerin to solutions of carbolic acid to ensure the solution of the acid. When dissolving two or more substances in the same liquid the liability to incompatibility must not be forgotten.

The *official* solutions are all *solutions in water of non-volatile substances.* There are twenty-four of them—namely:

	Dose.		
Liquor Acidi Arsenosi,	.06– .3	C.c.,	1– 5 ♏.
Liquor Ammonii Acetatis (*Spirit of Mindererus*),	3.7 – 30.00	C.c.,	1– 8 fʒ.
Liquor Arseni et Hydrargyri Iodidi (*Donovan's Solution*),	.06– .18	C.c.,	1– 3 ♏.
Liquor Calcis (*Lime-water*),	3.7 – 30.00	C.c.,	1– 8 fʒ.
Liquor Ferri Acetatis,	.3 – 1.	C.c.,	5–16 ♏.
Liquor Ferri Chloridi,	.3 – .6	C.c.,	5–10 ♏.
Liquor Ferri Citratis,	.3 – 1.	C.c.,	5–16 ♏.
Liquor Ferri et Ammonii Acetatis (*Basham's Mixture*),	7.50– 30.00	C.c.,	2– 8 fʒ.
Liquor Ferri Nitratis,	.06– .3	C.c.,	1– 5 ♏.
Liquor Ferri Subsulphatis (*Monsel's Solution*),	.3 – .6	C.c.,	5–10 ♏.
Liquor Ferri Tersulphatis,	for making arsenic antidote.		
Liquor Hydrargyri Nitratis,	escharotic.		
Liquor Iodi Compositus (*Lugol's Solution*),	.3 – 1.	C.c.,	5–16 ♏.
Liquor Magnesii Citratis,	180.00–360.00	C.c.,	6–12 fʒ.
Liquor Plumbi Subacetatis (*Goulard's Extract*),	used locally.		
Liquor Plumbi Subacetatis Dilutus (*Lead-water*),	used locally.		
Liquor Potassæ,	.3 – 1.8	C.c.,	5–30 ♏.
Liquor Potassii Arsenitis (*Fowler's Solution*),	.06– .3	C.c.,	1– 5 ♏.
Liquor Potassii Citratis,	3.7 – 30.00	C.c.,	1– 8 fʒ.
Liquor Sodæ,	.3 – 1.8	C.c.,	5–30 ♏.
Liquor Sodæ Chloratæ (*Labarraque's Solution*),	.60– 1.8	C.c.,	10–30 ♏.
Liquor Sodii Arsenatis (*Pearson's Solution*),	.06– .3	C.c.,	1– 5 ♏.

Liquor Sodii Silicatis (soluble glass),	used as a dressing.
Liquor Zinci Chloridi,	disinfectant.

The following prescriptions are examples of solutions:

℞. Potassii bromidi, Gm. 8.0;
Aquæ destillatæ, C.c. 60.0.—Misce.
Fiat solutio.
Sig. Tablespoonful in water every four hours.

℞. Hydrargyri chloridi corrosivi, gr. j;
Potassii iodidi, ʒij;
Aquæ destillatæ, f℥iij.—Misce.
Fiat solutio.
Sig. Teaspoonful in water after each meal.

℞. Liquoris potassii arsenitis,
Aquæ, *āā.* ʒij.—Misce.
Sig. Two drops in water after each meal, and increase gradually to ten drops.

℞. Tincturæ ferri chloridi, fʒj;
Acidi acetici diluti, fʒiss;
Liquoris ammonii acetatis, f℥j;
Elixiris aromatici, fʒiv;
Glycerini, fʒv;
Aquæ, q. s. ad f℥vj.—Misce.
Fiat solutio.
Sig. Tablespoonful in water every four hours.

21. LOTIONES.

(*Lotions.*)

Lotions are liquid preparations intended for external application. They usually consist of solutions or mixtures of medicinal agents in water. Eye-lotions or eye-washes are known as *collyria.*

There are no lotions official in the U. S. Pharmacopœia, but the following extemporaneous lotions are very generally employed:

Lotio Hydrargyri Nigra, Br. (*Black Wash*).
℞. Hydrargyri chloridi mitis, gr. xxx;
Liquoris calcis, f℥x.—Misce.
Sig. "Local use only." Keep the part wet with the solution.

Lotio Hydrargyri Flava, Br. (*Yellow Wash*).
℞. Hydrargyri chloridi corrosivi, gr. xviij;
Liquoris calcis, f℥x.—Misce.
Sig. "For local use only." Apply to the sore on a piece of lint.

Lead-water and Laudanum (*L. W. L.*).
℞. Liquoris plumbi subacetatis,
Tincturæ opii, *āā.* f℥j;
Aquæ, q. s. ad f℥xvj.—Misce.
Sig. "Poison." Keep constantly applied to the knee on soft cloths kept wet with this lotion.

Lotio Boricum (*Lotio B.*).
℞. Acidi borici, gr. xx;
Aquæ camphoræ,
Aquæ destillatæ, *āā.* ℥ij.—Misce.
Fiat collyrium.
Sig. Apply to the eyes freely three times a day.

22. MASSÆ.

(*Masses.*)

Masses are soft solid preparations of such consistency that they can be made into pills. The *official masses* are—

	Dose.	
Massa Copaibæ (*Solidified Copaibæ*),	.6–4. Gm.,	10–62 gr.
Massa Ferri Carbonatis (*Vallet's Mass*),	.20–.6 Gm.,	3–10 gr.
Massa Hydrargyri (*Blue Mass*),	.13–1.3 Gm.,	2–20 gr.

Method of Prescribing Masses:

℞. Massæ hydrargyri, Gm. .3.
Fiat pilula No. i.
Sig. Take at bed-time.

℞. Massæ ferri carbonatis, gr. xxiv.
Fiant pilulæ No. xii.
Sig. One after each meal.

23. MELLITA.

(*Honeys.*)

Honeys are sweet liquids having honey as a base, and are used in making pill-masses and as agreeable vehicles. Honey is largely used to sweeten cough-mixtures, and is supposed to possess some power to allay an irritable cough by its action upon the mucous membrane. Three honeys are *official:*

	Dose.	
Mel,	3.7–7.5 C.c.,	1–2 fʒ.
Mel Despumatum,	3.7–7.5 C.c.,	1–2 fʒ.
Mel Rosæ,	3.7–7.5 C.c.,	1–2 fʒ.

℞. Potassii chloratis, gr. x;
Acidi borici, gr. xx;
Mellis despumati, f℥ij.—Misce.
Sig. Apply well to the inside of the mouth.

℞. Mellis rosæ,
Infusi picis liquidæ, *āā.* f℥j.—Misce.
Sig. Teaspoonful every two hours.

24. MISTURÆ.

(*Mixtures.*)

Mixtures are liquid preparations which have suspended in them insoluble medicinal substances. A general characteristic of this class of preparations is that, if allowed to stand, precipitation of the undissolved substances results. A "Shake" label should always be placed upon the bottle containing mixtures. Usually syrups or mucilages are contained in prescriptions for mixtures, to hold suspended for a brief period the undissolved particles. The four *official mixtures*, which are all *aqueous* suspensions of insoluble substances, are—

	Dose.	
Mistura Cretæ,	3.7–15.00 C.c.,	1–4 fʒ.
Mistura Ferri Composita (*Griffith's Mixture*),	3.7–15.00 C.c.,	1–4 fʒ.
Mistura Glycyrrhizæ Composita (*Brown Mixture*),	3.7–15.00 C.c.,	1–4 fʒ.
Mistura Rhei et Sodæ,	1.8– 7.50 C.c.,	½–2 fʒ.

The following are examples of mixtures:

℞. Zinci sulphatis,		gr. xv;
Plumbi acetatis,		gr. xxx;
Mucilaginis acaciæ,		f℥j;
Aquæ destillatæ,	q. s. ad	f℥vj.—Misce.

Sig. "Shake." Local use.

℞. Ammonii chloridi,	Gm. 15.00;
Codeinæ,	Gm. 0.130;
Misturæ glycyrrhizæ comp.,	Gm. 180.00.—Misce.

Sig. "Shake well." Two teaspoonfuls in water every two hours.

℞. Tincturæ kino, f℥j;
Tincturæ catechu compositæ, f℥j;
Misturæ cretæ, f℥iij;
Aquæ cinnamomi, q. s. ad f℥vj.—Misce.
Sig. "Shake well before using." Teaspoonful every three hours.

25. MUCILAGINES.

(*Mucilages.*)

Mucilages are solutions in water of gums or the mucilaginous principles of vegetable substances. They are used in aqueous liquid prescriptions to suspend some insoluble substance, and in solid prescriptions as excipients for forming masses for pills, troches, etc. The mucilages are soothing to inflamed mucous membranes, and are frequently used for this purpose. Mucilage of sassafras-pith is largely used in eye-washes. The *official mucilages* are—

	Dose.	
Mucilago Acaciæ,	3.7–15.0 C.c.,	1–4 fʒ or more.
Mucilago Sassafras Medullæ,	3.7–15.0 C.c.,	1–4 fʒ or more.
Mucilago Tragacanthæ,	3.7–15.0 C.c.,	1–4 fʒ or more.
Mucilago Ulmi,	3.7–15.0 C.c.,	1–4 fʒ or more.

The following prescriptions will illustrate some of the uses of mucilages:

℞. Bismuthi subnitratis, ʒiiss;
Acidi carbolici, ♏iv;
Mucilaginis acaciæ, fʒiv;
Aquæ cinnamomi, q. s. f℥ij.—Misce.
Sig. "Shake." Teaspoonful every two hours.

℞. Antimonii sulphurati, Gm. 3.25;
Hydrargyri chloridi mitis, Gm. 3.25;
Guaiaci, Gm. 6.50;
Mucilaginis tragacanthæ, q. s.—Misce.
Fiat massa et in pilulas No. c divide.
Sig. Take one pill night and morning.

26. OLEATA.

(*Oleates.*)

An oleate is a solution of an alkaloid or a metallic oxide in oleic acid, and is intended to be applied by inunction. Oleates are supposed to be absorbed more readily than ointments made with other bases. There are three *official oleates*, and they are of course all used locally:

Oleatum Hydrargyri.
Oleatum Veratrinæ.
Oleatum Zinci.

℞. Oleati hydrargyri, Gm. 1.;
Petrolati mollis, Gm. 15.—Misce.
Sig. Small piece in the eye at bed-time.

℞. Oleati veratrinæ, ℥iv.
Sig. Rub over the painful spot night and morning.

27. OLEORESINÆ.

(*Oleoresins.*)

Oleoresins are thick liquid preparations consisting of oils and resins extracted from vegetable substances by ether; the ether is then evaporated. Oleoresins are the strongest liquid preparations of vegetable substances. They are best prescribed in emulsions, pills, or capsules. Six are *official*—namely:

	Dose.	
Oleoresina Aspidii,	1.8 to 3.7 C.c.,	½ to 1 f℥.
Oleoresina Capsici,	.016 to .06 C.c.,	¼ to 1 ♏.
Oleoresina Cubebæ,	.3 to 1.2 C.c.,	5 to 20 ♏.
Oleoresina Lupulini,	.13 to .3 C.c.,	2 to 5 ♏.
Oleoresina Piperis,	.016 to .06 C.c.,	¼ to 1 ♏.
Oleoresina Zingiberis,	.03 to .06 C.c.,	½ to 1 ♏.

The following prescriptions illustrate the method of writing for oleoresins:

℞.	Oleoresinæ aspidii,	fʒij;
	Acaciæ,	q. s.;
	Aquæ cinnamomi,	q. s. ad f℥iv.—Misce.

Fiat emulsum.

Sig. Two tablespoonfuls night and morning.

℞.	Oleoresinæ capsici,	gtt. vj;
	Extracti nucis vomicæ,	gr. vj;
	Extracti gentianæ,	gr. xlviij.—Misce.

Fiant pilulæ No. xii.

Sig. One after each meal.

℞.	Oleoresinæ cubebæ,	fʒij;
	Copaibæ,	fʒiv;
	Salol,	ʒij;
	Pepsini,	gr. xxiv.—Misce.

Fiant capsulæ No. xxiv.

Sig. One six times a day.

℞.	Oleoresinæ zingiberis,	fʒss;
	Tincturæ opii,	fʒiv;
	Spiritus chloroformi,	fʒiv;
	Spiritus camphoræ,	fʒiv;
	Spiritus vini gallici,	q. s. ad f℥iij.—Misce.

Sig. "For cramps." Teaspoonful in whiskey every hour, if in pain.

28. PILULÆ.

(*Pills.*)

Pills are small globular, oval, or flattened bodies, of such size and consistency that they can be swallowed whole. The usual weight of a pill is from 1 to 5 grains, but if made of a heavy metallic salt the weight may be somewhat greater. When made extemporaneously they may be coated with gelatin, with tolu, or with silver-foil. Sugar-coated pills are made only in large quantities. Insoluble substances should not be prescribed in compressed pills. Substances with a disagreeable taste, and those that are active in small quantities, such as alkaloids, glucosides, extracts, oleoresins, and many metallic salts, are most conveniently administered in pilular form. As a rule, liquids should not be prescribed in pills, although, if it is so desired, one or two drops of liquid may enter into a pill by mixing with the liquid some inert powder or dry extract. Medicines that are irritant or caustic upon mucous membrane are usually best administered in liquids, and are to be well diluted when given; but they may be administered in pills in small quantities by diluting the caustic medicament with some inert substance. When a quick action is desired drugs should be ordered in liquid form, as pills must first be dissolved in the stomach or the intestines before they can be absorbed. For this reason stimulants, which are expected to act immediately, and emetics, should not be prescribed in pills. Medicines, the dose of which is large, and those that are deliquescent, are not suited for pills. Efflorescent chemicals should first be heated to drive off their water of crystallization before being made into pills.

In selecting the excipient for making the mass considerable knowledge of the character of the substances entering into the pills is essential, as the mass must be sufficiently adhesive to prevent it from crumbling while being rolled into a cylinder. The pill must be sufficiently hard to retain its shape, and yet not so hard as to pass through the intestinal canal undissolved. When the ingredients are all solids a few drops of some liquid are frequently necessary to form the mass. A *granule* is a very small pill.

The selection of the excipient is frequently left to the discretion of the pharmacist, but in many pill-masses no excipient is necessary, as the medicines entering into their formation are of such a character that they can be made readily into a mass without an excipient. The following is a list of excipients in frequent use (for convenience they are divided into liquids and solids):

Liquid Excipients.

Alcohol is frequently added to resinous extracts in order to form them into pills, but after the alcohol evaporates the pills are sometimes so hard as to pass through the intestinal tract undissolved.

Water is of value as an excipient when the substances are of such a nature that by its use they become soft and adhesive.

Syrup and *Glucose* have a wide range of usefulness as excipients, as they are adhesive liquids.

Glycerin, being hygroscopic in character, is of much value as an excipient: pills in which it is used do not become hard; and for this reason it is especially useful for making quinine pills.

Glycerite of Starch and Tragacanth possess the advantages of glycerin, and in addition are much more adhesive; consequently they have a wider range of usefulness.

Honey is a good excipient, but, being dark, it should not be used for making pills of quinine and other white powders.

Aromatic Sulphuric Acid is largely used for making quinine pills, the object being to render the quinine more soluble in the juices of the stomach.

Solid Excipients.

Vegetable Extracts, such as extracts of gentian and of glycyrrhiza, are often used in pill-masses to give them bulk and adhesiveness.

Powdered Acacia and Althea are added to powders that do not become adhesive upon the addition of a liquid, and they also enter into the formation of pills containing small quantities of liquids.

Bread-crumbs form a convenient excipient for administering in pill-form small quantities of volatile oils or other liquids that are active in small quantities.

Soap is a valuable excipient in making pills of gum-resins or of resinous substances like asafetida and aloes.

Hard Petroleum, *Resin Cerate*, and *Cacao-butter* are used with corrosive or readily-oxidizable substances, such as potassium permanganate or silver nitrate.

There are fifteen *official pills*, namely:

	Dose.
Pilulæ Aloes,	1–3 pills.
Pilulæ Aloes et Asafœtidæ,	1–3 pills.
Pilulæ Aloes et Ferri,	1–3 pills.
Pilulæ Aloes et Mastiches (*Lady Webster Dinner-pill*),	1–3 pills.
Pilulæ Aloes et Myrrhæ,	1–3 pills.
Pilulæ Antimonii Compositæ (*Plummer's Pill*),	1–2 pills.
Pilulæ Asafœtidæ,	1–3 pills.
Pilulæ Catharticæ Compositæ,	1–3 pills.
Pilulæ Catharticæ Vegetabiles,	1–3 pills.
Pilulæ Ferri Carbonatis (*Blaud's Pill*),	1–3 pills.
Pilulæ Ferri Iodidi (*Blancard's*),	1–3 pills.
Pilulæ Opii,	1–2 pills.
Pilulæ Phosphori,	1–2 pills.
Pilulæ Rhei,	1–3 pills.
Pilulæ Rhei Compositæ,	1–3 pills.

When writing prescriptions for official pills the name of the pills is written in the accusative case, followed by the number of pills wanted; thus:

℞. Pilulas asafœtidæ, vj.
Sig. One three times a day.

When writing a prescription for extemporaneous pills the names of the substances are written in the genitive case, followed by the quantities entering into the whole number. Suppose the physician wishes to write for twelve pills, each containing 1 grain of aloin, 1 grain of extract of rhamnus purshiana, $\frac{1}{2}$ grain of extract of nux vomica, $\frac{1}{8}$ grain of extract of physostigma, and $\frac{1}{6}$ grain of extract of belladonna. After multiplying each quantity by twelve (the number of pills to be made) the whole quantity is written on a line following the name of the medicine; thus:

In each pill, ℞.		Total quantity.
1 grain	Aloini,	gr. xij;
1 grain	Extracti rhamni purshianæ,	gr. xij;
$\frac{1}{2}$ grain	Extracti nucis vomicæ,	gr. vj;
$\frac{1}{8}$ grain	Extracti physostigmatis,	gr. iss;
$\frac{1}{6}$ grain	Extracti belladonnæ foliorum alcoholici,	gr. ij;
q. s.	Syrupi,	q. s.

Misce et in pilulas No. xii divide.
Sig. One at bed-time.

℞. Hydrargyri iodidi flavi, gr. vj;
Pulvis ipecacuanhæ et opii, gr. xij;
Extracti gentianæ, q. s.—Misce.
Fiant pilulæ No. xxiv.
Sig. One after each meal.

℞. Potassii permanganatis, gr. xij;
Petrolati spissi, gr. xlviij.—Misce.
Fiant pilulæ No. xii.
Sig. One two hours after each meal, to be followed by a full glass of water.

℞. Auri et sodii chloridi,	gr. j;
Barii chloridi,	gr. ij;
Extracti nucis vomicæ,	gr. x;
Syrupi acaciæ,	q. s.—Misce.

Fiant pilulæ No. xx.
Sig. One three times daily.

℞. Olei tiglii,	gtt. ij;
Micæ panis,	gr. viij.—Misce.

Fiant pilulæ No. ii.
Sig. One pill to be taken immediately.

℞. Quininæ sulphatis,	gr. xl;
Acidi tartarici,	gr. viij;
Glyceriti amyli,	q. s.—Misce.

Fiant pilulæ No. x.
Sig. One at 1 and 2, and two at 6 P. M.

℞. Morphinæ sulphatis,	gr. j.

Fiant granula No. x.
Sig. One every hour.

29. PULVERES.

(*Powders.*)

All the official powders are combinations of several substances in powdered form. As a rule, medicines that are insoluble, the dose of which is small and the taste is not unpleasant, are best suited for administration in the form of a powder. Hygroscopic, deliquescent, efflorescent, and volatile substances, and those with a very disagreeable taste, are not suited for administration in this form; but if it is desired to administer any substance having any of the first four characteristics, they should be dispensed in paraffin paper. Caustic substances, which are best administered in liquids, are to be well diluted at the time of administering, but if the quantity is very small, it may be well diluted with some inert powder and prescribed in this manner. Serious injury has resulted from administering ammonium carbonate in the form of powder upon the tongue of a small child.

The following substances are used as diluents and also to give bulk to small quantities of substances in powder: sugar of milk, cane-sugar, compound chalk-powder, aromatic powder, powdered licorice, powdered starch, powdered acacia, and magnesia. Powders may be dispensed in bulk or in little paper packages known as *chartulæ*, which, literally, mean little papers, but in prescription-writing they signify little packages of powders.

Nine powders, all of which are combinations of several remedies, are *official*, namely:

	Dose.	
Pulvis Antimonialis (*James's Powder*),	0.19–0.65 Gm.,	3– 10 gr.
Pulvis Aromaticus,	0.65–2.0 Gm.,	10– 31 gr.
Pulvis Cretæ Compositus,	0.32–4.0 Gm.,	5– 62 gr.
Pulvis Effervescens Compositus (*Seidlitz Powder*),	one set.	
Pulvis Glycyrrhizæ Compositus,	2.0 –8.0 Gm.,	31–123 gr.
Pulvis Ipecacuanhæ et Opii (*Dover's Powder*),	0.32–1.3 Gm.,	5– 20 gr.
Pulvis Jalapæ Compositus,	1.0 –2.59 Gm.,	15– 40 gr.
Pulvis Morphinæ Compositus (*Tully's Powder*),	.32–0.65 Gm.,	5– 10 gr.
Pulvis Rhei Compositus,	2.0 –4.0 Gm.,	31– 62 gr.

The following prescriptions illustrate the method of writing for powders:

℞. Pulveris glycyrrhizæ compositi, ℥ss.
Sig. One teaspoonful at bed-time.

℞. Pulveris glycyrrhizæ compositi, ʒij;
Potassii bitartratis, ʒij;
Sulphuris loti, ʒij.—Misce.
Sig. Teaspoonful at bed-time.

℞. Hydrargyri chloridi mitis, gr. j;
Sacchari lactis, gr. iij.
Misce et in chartulas No. vi divide.
Sig. One on the tongue every half-hour.

℞. Bismuthi subnitratis, ʒij;
Pepsini, ʒj.—Misce.
Fiant chartulæ No. xii.
Sig. One on the tongue every two hours.

℞. Pulveris ipecacuanhæ et opii, gr. xx.
Fiant chartulæ No. ii.
Sig. One at bed-time.

30. RESINÆ.

(*Resins.*)

Resins are a class of solid preparations made by distilling the volatile oil from natural oleoresins or by precipitating resins from alcoholic solutions by the addition of water. They are soluble in alcohol, insoluble in water, and are precipitated from alcoholic solutions by water. They may be prescribed in pills, capsules, in alcoholic solution, and some of them in powders. The *official* resins are—

	Dose.	
Resina,	0.065–0.32 Gm.,	1– 5 gr.
Resina Copaibæ,	0.65 –1.3 Gm.,	10–20 gr.
Resina Jalapæ,	0.13 –0.24 Gm.,	2– 4 gr.
Resina Podophylli,	0.003–0.03 Gm.,	$\frac{1}{20}$– $\frac{1}{2}$ gr.
Resina Scammonii,	0.13 –0.52 Gm.,	2– 8 gr.

℞. Hydrargyri chloridi mitis, gr. ij ;
Resinæ jalapæ gr. v.—Misce.
Fiant pilulæ No. ii.
Sig. Take at once.

℞. Resinæ podophylli, gr. j ;
Alcoholis, fʒj.—Misce.
Fiat solutio.
Sig. Two drops on sugar night and morning.

31. SPIRITUS.

(*Spirits.*)

Spirits are alcoholic solutions of gases, volatile liquids, or volatile solids. A large number are solutions of volatile oils in alcohol, and these are mostly used as flavoring agents or as carminatives. With the exception of the spirits of ether, nitrous ether, ammonia, whiskey, and brandy, they all make cloudy or milky mixtures when added in considerable quantities to water. This turbidity is due to the separation of the volatile oils or other volatile substances which they contain. Being strongly alcoholic, they are good solvents for resins, oleoresins, and resinous extracts, and they do not cause precipitation when added to fluid extracts and tinctures. The following are the *official spirits:*

	Dose.	
Spiritus Ætheris,	3.7 –11.0 C.c.,	1– 3 fʒ.
Spiritus Ætheris Compositus (*Hoffman's Anodyne*),	1.8 – 3.7 C.c.,	30–60 ♏.
Spiritus Ætheris Nitrosi (*Sweet Spirit of Nitre*),	0.6 – 3.7 C.c.,	10–60 ♏.
Spiritus Ammoniæ,	0.6 – 3.7 C.c.,	10–60 ♏.
Spiritus Ammoniæ Aromaticus,	0.6 – 3.7 C.c.,	10–60 ♏.
Spiritus Amygdalæ Amaræ,	0.18– 0.6 C.c.,	3–10 ♏.
Spiritus Anisi,	3.7 – 7.5 C.c.,	1– 2 fʒ.
Spiritus Aurantii,	0.6 – 3.7 C.c.,	10–60 ♏.

	Dose.	
Spiritus Aurantii Compositus,	0.6 – 3.7 C.c.,	10–60 ♏.
Spiritus Camphoræ,	0.3 – 1.8 C.c.,	5–30 ♏.
Spiritus Chloroformi,	0.6 – 3.7 C.c.,	10–60 ♏.
Spiritus Cinnamomi,	0.6 – 3.7 C.c.,	10–60 ♏.
Spiritus Frumenti (*Whiskey*),	as required.	
Spiritus Gaultheriæ,	0.6 – 3.7 C.c.,	10–60 ♏.
Spiritus Glonoini (*Spirit of Nitro-glycerin*),[1]	0.06 C.c.,	1 ♏.
Spiritus Juniperi,	0.6 – 3.7 C.c.,	10–60 ♏.
Spiritus Juniperi Compositus,	3:7 –15.0 C.c.,	1– 4 fʒ.
Spiritus Lavandulæ,	1.8 – 3.7 C.c.,	½– 1 fʒ.
Spiritus Limonis,	1.8 – 3.7 C.c.,	½– 1 fʒ.
Spiritus Menthæ Piperitæ,	0.6 – 1.2 C.c.,	10–20 ♏.
Spiritus Menthæ Viridis,	1.2 – 2.5 C.c.,	20–40 ♏.
Spiritus Myrciæ (*Bay Rum*),	locally.	
Spiritus Myristicæ,	0.6 – 1.2 C.c.,	10–20 ♏.
Spiritus Phosphori,	0.5 – 1. C.c.,	8–16 ♏.
Spiritus Vini Gallici (*Brandy*),	as required.	

The following prescriptions show combinations of spirits in oleaginous, aqueous, and alcoholic liquids:

℞. Emulsionis olei morrhuæ, f℥viij;
Spiritus amygdalæ amaræ, gtt. xxx.—Misce.
Sig. Tablespoonful two hours after meals.

℞. Bismuthi subnitratis, ʒij;
Spiritus menthæ piperitæ, fʒss;
Aquæ menthæ piperitæ, q. s. ad f℥iij.—Misce.
Sig. "Shake well." Teaspoonful every two hours.

℞. Spiritus chloroformi, fʒj;
Tincturæ opii, fʒij;
Acidi sulphurici aromatici, fʒj;
Syrupi zingiberis, q. s. ad f℥iij.—Misce.
Sig. Teaspoonful in water every two hours for diarrhœa.

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[1] Initial dose.

℞. Extracti cannabis indicæ fluidi,
Spiritus chloroformi, *āā.* f℥ij.—Misce.
Sig. Twenty drops in whiskey or in brandy every three hours until pain is relieved.

32. SUPPOSITORIA.
(*Suppositories.*)

Suppositories are solid bodies intended to be introduced into the rectum, the vagina, the urethra, or the nostril for the purpose of producing either systemic or local effect. They may either be moulded in suppository-moulds or be made by hand. Oil of theobroma (cacao-butter) is the most frequent base for suppositories, although recently a suppository composed of glycerin, sodium carbonate, and stearic acid has been introduced into the United States *Pharmacopœia;* this suppository is to be made freshly when wanted. The value of oil of theobroma as a base for suppositories lies in the fact that at the ordinary temperature it is a firm solid, but melts at the temperature of the body.

The following general formula has been introduced into the United States *Pharmacopœia* of 1890:

"Rectal suppositories should be cone-shaped, and of a weight of about one (1) gramme (Fig. 8).

"Urethral suppositories should be cylindrical or pencil-shaped, and of a weight of about one (1) gramme.

"Vaginal suppositories should be globular, and of a weight of about three (3) grammes."

Urethral suppositories are called "bougies," and vaginal suppositories are termed "pessaries." Suppositories for children should be smaller than those for adults.

Occasionally a small quantity of wax is added to suppositories to make them firmer and less liable to break when removing them from the moulds: this is very bad practice, as the wax remaining undissolved irritates the mucous membrane of the cavity into which it has been introduced. This adulteration may be detected by gently heating the suppository, contained in a spoon, over a gas-jet or a lamp. The directions for using suppositories should be carefully given. There is but one *official* suppository—Suppositoria Glycerini.

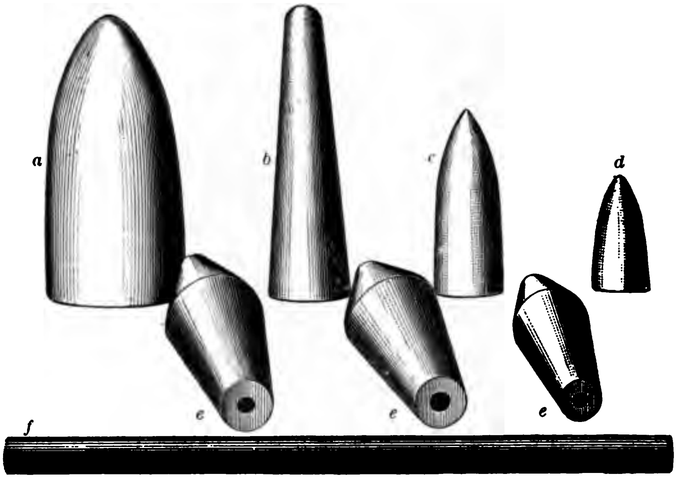

FIG. 8.—Different Forms of Suppositories: *a*, vaginal suppository; *b, c, d, e*, rectal suppositories of different forms and sizes; *f*, urethral suppository. (H. Blair).

Method of writing for extemporaneous suppositories.

℞. Cocainæ hydrochloratis,	gr. v;
Olei theobromatis,	gr. xxiv.—Misce.

Fiant suppositoria nasalia No. x.
Sig. One in the right nasal opening while reclining.

℞. Iodoformi,	gr. xxiv;
Olei theobromatis,	ʒj.—Misce.

Fiant bougiæ No. vj.
Sig. Introduce one into the urethra at bed-time.

℞. Extracti opii,	gr. x;
Extracti belladonnæ alcoholici foliorum,	gr. iij;
Olei theobromatis,	ʒiss.—Misce.

Fiant suppositoria No. x.

Sig. Introduce one into the rectum at bed-time.

℞. Cocainæ hydrochloratis,	gr. xij;
Iodoformi,	gr. xxx;
Olei theobromatis,	q. s.—Misce.

Fiant pessariæ No. vi.

Sig. Use locally as directed, twice daily.

℞. Glycerini,	Gm. 60;
Sodii carbonatis,	Gm. 3;
Acidi stearici,	Gm. 5.—Misce.

Fiant suppositoria No. x.

Sig. Introduce one into the bowel each morning.

33. SYRUPI.

(*Syrups.*)

Syrups are strong solutions of sugar in water or medicated aqueous liquids. They may conveniently be classified into those used as pleasant vehicles or flavoring agents, and those of distinct medicinal value. They afford a means of administering many disagreeable remedies in a palatable form, and, as they are of a thick consistency, are largely used in mixtures to hold in suspension small insoluble particles. Syrup and the syrup of acacia are good excipients in forming many pill-masses. The syrups are freely miscible with water and aqueous liquids, but if added in concentrated form to strong alcoholic liquids the sugar gradually crystallizes out of solution. Syrups of hydriodic acid, citric acid, garlic, and squill are acid in reaction, and if mixed with alkaline carbonates they result in decomposition of the carbonate with liberation of carbonic oxide. Disregard of this fact has led to explosions in a mixture containing syrup of squill with ammonium carbonate. There are thirty-two *official* syrups. The *official* syrups having distinct medicinal value are—

	Dose.	
Syrupus Acidi Hydriodici,	1.8–15.0 C.c.,	½–4 fʒ.
Syrupus Allii,	3.7–7.5 C.c.,	1–2 fʒ.
Syrupus Amygdalæ,	3.7–7.5 C.c.,	1–2 fʒ.
Syrupus Calcii Lactophosphatis,	3.7–15.0 C.c.,	1–4 fʒ.
Syrupus Calcis,	1.8–3.7 C.c.,	½–1 fʒ.
Syrupus Ferri Iodi,	0.3–2. C.c.,	5–32 ♏.
Syrupus Ferri, Quininæ et Strychninæ Phosphatum,	3.7–7.5 C.c.,	1–2 fʒ.
Syrupus Hypophosphitum,	3.7–15.0 C.c.,	1–4 fʒ.
Syrupus Hypophosphitum cum Ferro,	3.7–15.0 C.c.,	1–4 fʒ.
Syrupus Ipecacuanhæ,[1]	1.8–3.7 C.c.,	½–1 fʒ.
Syrupus Krameriæ,	1.8–7.5 C.c.,	½–2 fʒ.
Syrupus Lactucarii,	3.7–11.2 C.c.,	1–3 fʒ.
Syrupus Picis Liquidæ,	3.7–7.5 C.c.,	1–2 fʒ.
Syrupus Pruni Virginianæ,	1.8–3.7 C.c.,	½–1 fʒ.
Syrupus Rhei,	1.8–15.0 C.c.,	½–4 fʒ.
Syrupus Rhei Aromaticus,	1.8–15.0 C.c.,	½–4 fʒ.
Syrupus Rubi,	3.7–7.5 C.c.,	1–2 fʒ.
Syrupus Scillæ,	1.8–3.7 C.c.,	½–1 fʒ.
Syrupus Scillæ Compositus (*Coxe's Hive Syrup*),	0.6–3.7 C.c.,	10–60 ♏.
Syrupus Sennæ,	1.8–7.5 C.c.,	½–2 fʒ.
Syrupus Senegæ,	1.8–7.5 C.c.,	½–2 fʒ.

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[1] This is the expectorant dose of syrup of ipecacuanha; the emetic dose for an adult is 4 to 8 fʒ—for a child one or two years of age, ½ to 1 fʒ every twenty minutes until vomiting is produced.

The *official* syrups used as flavoring agents are as follows (they may be used in any quantity):

Syrupus.
Syrupus Acaciæ.
Syrupus Acidi Citrici.
Syrupus Althææ.
Syrupus Aurantii.
Syrupus Aurantii Florum.
Syrupus Rosæ.
Syrupus Rubi Idiæ.
Syrupus Sarsaparillæ Compositus.
Syrupus Tolutanus.
Syrupus Zingiberis.

The following are prescriptions containing syrups:

℞.	Chloralis,		gr. xxx;
	Syrupi lactucarii,		f℥ij.—Misce.

Sig. Teaspoonful in water every four hours.

℞.	Potassii iodidi,		fʒiv;
	Vini colchici radicis,		fʒiv;
	Syrupi sarsaparillæ compositi,		f℥ij;
	Aquæ,	q. s. ad	f℥vj.—Misce.

Sig. Two teaspoonfuls in water two hours after meals.

℞.	Ammonii chloridi,		fʒij;
	Syrupi scillæ,		fʒij;
	Syrupi ipecacuanhæ,		fʒiij;
	Syrupi acaciæ,	q. s. ad	f℥iij.—Misce.

Sig. Teaspoonful in water every four hours.

℞.	Extracti hæmatoxyli fluidi,		f℥ij;
	Spiritus chloroformi,		fʒij;
	Tincturæ opii camphoratæ,		f℥j;
	Acidi sulphurici aromatici,		fʒj;
	Syrupi zingiberis,	q. s. ad	f℥vj.—Misce.

Sig. Two teaspoonfuls in water every two hours.

34. Tabellæ.

(*Tablet-triturates.*)

This class of preparations has become very popular within the past few years.

Tabellæ are small disks usually made by thoroughly triturating powdered medicines or medicated liquids with finely-powdered sugar of milk or with powdered sugar, moistening the powder with sufficient alcohol to make a paste, and pressing it into moulds consisting of a plate perforated with holes, and then pressing out the tablets by fitting this perforated plate over another plate, upon which are situated pegs that accurately fit the perforations. When the alcohol evaporates and the tablets are dry they are ready for use (Fig. 9). Medicines, the dose of which is small, such as calomel, morphine sulphate, and tincture of aconite, are best suited for making tablet-triturates. There are none *official*. The following formulæ illustrate the method of prescribing:

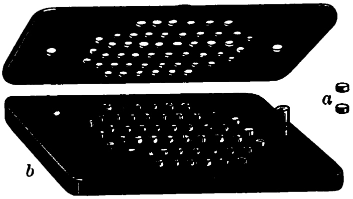

FIG. 9.—*a*, Tabiet-triturates ; *b*, Tablet-mould.

℞. Tincturæ aconiti,	♏xxv;
Sacchari lacti,	q. s.;
Alcoholis,	q. s.—Misce.

Fiant tabellæ No. xxv.

Sig. One every hour.

℞. Hydrargyri chloridi mitis,	gr. j;
Sacchari lactis,	q. s.;
Alcoholis,	q. s.—Misce.

Fiant tabellæ No. x.

Sig. One every hour.

35. TINCTURÆ.

(*Tinctures.*)

Tinctures are alcoholic or hydro-alcoholic liquids made (with three exceptions[1]) from vegetable substances. They are not so strong as fluid extracts, and are not all of uniform and definite strength, but each tincture has its own strength. They differ from spirits in being made from *non-volatile*[2] substances. Many tinctures precipitate or become cloudy upon being added to aqueous liquids, and when it is desired to dispense them in a diluted form the best vehicles are brandy, whiskey, wine, or aromatic elixir. Those that are not precipitated nor made cloudy by addition of water may be dispensed in any of the aromatic waters. The strong mineral acids should not be added to tinctures. Nearly all tinctures contain tannin, and should not be mixed with tincture of ferric chloride or other preparations of iron. Tincture of ferric chloride and tincture of sanguinaria are acid in reaction, and ammoniated tincture of guaiac and ammoniated tincture of valerian are strongly alkaline. Seventy-two tinctures are *official*—namely:

	Dose.	
Tinctura Aconiti,	0.06– .5 C.c.,	1 – 5 ♏.
Tinctura Aloes,	1.8 – 7.5 C.c.,	½ – 2 fʒ.
Tinctura Aloes et Myrrhæ,	1.8 – 7.5 C.c.,	½ – 2 fʒ.
Tinctura Arnicæ Florum,	0.6 – 1.8 C.c.,	10 –30 ♏.
Tinctura Arnicæ Radicis,	0.6 – 1.8 C.c.,	10 –30 ♏.
Tinctura Asafœtidæ,	1.8 – 3.7 C.c.,	½ – 1 fʒ.
Tinctura Aurantii Amari,	3.7 – 7.5 C.c.,	1 – 2 fʒ.
Tinctura Aurantii Dulcis,	3.7 – 7.5 C.c.,	1 – 2 fʒ.
Tinctura Belladonnæ Foliorum,	0.3 – 1.0 C.c.,	5 –16 ♏.
Tinctura Benzoini,	0.6 – 1.8 C.c.,	10 –30 ♏.

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[1] Tincture of ferric chloride, of iodine, and of cantharides.

[2] Iodine is volatile.

	Dose.	
Tinctura Benzoini Composita,	1.8 – 3.7 C.c.,	30 –60 ♏.
Tinctura Bryoniæ,	0.6 – 7.5 C.c.,	10 ♏– 2 fʒ.
Tinctura Calendulæ,	externally.	
Tinctura Calumbæ,	1.8 – 7.5 C.c.,	½ – 2 fʒ.
Tinctura Cannabis Indicæ,	1.0 – 3.7 C.c.,	16 ♏– 1 fʒ.
Tinctura Cantharidis,	0.06– 0.6 C.c.,	1 –10 ♏.
Tinctura Capsici,	0.6 – 1.8 C.c.,	10 –30 ♏.
Tinctura Cardamomi,	3.7 – 7.5 C.c.,	1 – 2 fʒ.
Tinctura Cardamomi Composita,	3.7 – 7.5 C.c.,	1 – 2 fʒ.
Tinctura Catechu Composita,	1.8 – 7.5 C.c.,	½ – 2 fʒ.
Tinctura Chiratæ,	3.7 –15.0 C.c.,	1 – 4 fʒ.
Tinctura Cimicifugæ,	3.7 – 7.5 C.c.,	1 – 2 fʒ.
Tinctura Cinchonæ,	3.7 – 7.5 C.c.,	1 – 2 fʒ.
Tinctura Cinchonæ Composita (Huxham's Tincture),	3.7 –15.0 C.c.,	1 – 4 fʒ.
Tinctura Cinnamomi,	1.8 – 3.7 C.c.,	½ – 1 fʒ.
Tinctura Colchici Seminis,	1.8 – 3.7 C.c.,	½ – 1 fʒ.
Tinctura Croci,	3.7 – 7.5 C.c.,	1 – 2 fʒ.
Tinctura Cubebæ,	1.8 –15.0 C.c.,	½ – 4 fʒ.
Tinctura Digitalis,	0.6 – 1.2 C.c.,	10 –20 ♏.
Tinctura Herbara Recentium,	the dose depends upon the drug from which made.	
Tinctura Ferri Chloridi,	0.6 – 1.8 C.c.,	10 –30 ♏.
Tinctura Gallæ,	3.7 – 7.5 C.c.,	1 – 2 fʒ.
Tinctura Gelsemii (U. S. P.),	0.6 – 1.2 C.c.,	10 –20 ♏.
Tinctura Gentianæ Composita,	1.8 – 3.7 C.c.,	½ – 1 fʒ.
Tinctura Guaiaci,	1.8 – 3.7 C.c.,	30 –60 ♏.
Tinctura Guaiaci Ammoniata,	1.8 – 3.7 C.c.,	30 –60 ♏.
Tinctura Humuli,	15.0 –89.0 C.c.,	4 fʒ– 3 f℥.
Tinctura Hydrastis,	1.8 – 7.5 C.c.,	½ – 2 fʒ.
Tinctura Hyoscyami,	1.8 – 3.7 C.c.,	½ – 1 fʒ.
Tinctura Iodi,	0.18– 0.3 C.c.,	3 – 5 ♏.

	Dose.	
Tinctura Ipecacuanhæ et Opii,	0.3 - 1.0 C.c.,	5 -16 ♏.
Tinctura Kino,	3.7 - 7.5 C.c.,	1 - 2 fʒ.
Tinctura Krameriæ,	3.7 - 7.5 C.c.,	1 - 2 fʒ.
Tinctura Lactucarii,	1.8 - 3.7 C.c.,	½ - 1 fʒ.
Tinctura Lavandulæ Composita,	1.8 - 3.7 C.c.,	½ - 1 fʒ.
Tinctura Lobeliæ,	0.6 - 1.8 C.c.,	10 -30 ♏.
Tinctura Lobeliæ (as emetic),	3.7 - 7.5 C.c.,	1 - 2 fʒ.
Tinctura Matico,	1.8 - 7.5 C.c.,	1 - 2 fʒ.
Tinctura Moschi,	3.7 -15.0 C.c.,	1 - 4 fʒ.
Tinctura Myrrhæ,	0.3 - 1.0 C.c.,	5 -16 ♏.
Tinctura Nucis Vomicæ,	0.3 - 1.2 C.c.,	5 -20 ♏.
Tinctura Opii (Laudanum),	0.3 - 1.2 C.c.,	5 -20 ♏.
Tinctura Opii Camphorata (Paregoric),	1.8 -15.0 C.c.,	½ - 4 fʒ.
Tinctura Opii Deodorati,	0.3 - 1.2 C.c.,	5 -20 ♏.
Tinctura Physostigmatis,	0.3 - 1.2 C.c.,	5 -20 ♏.
Tinctura Pyrethri,	externally.	
Tinctura Quassiæ,	1.8 - 3.7 C.c.,	½ - 1 fʒ.
Tinctura Quillajæ,	externally.	
Tinctura Rhei,	3.7 - 7.5 C.c.,	1 - 2 fʒ.
Tinctura Rhei Aromatica,	1.8 - 3.7 C.c.,	½ - 1 fʒ.
Tinctura Rhei Dulcis,	3.7 - 7.5 C.c.,	1 - 2 fʒ.
Tinctura Sanguinariæ,	0.3 - 1.8 C.c.,	5 -30 ♏.
Tinctura Scillæ,	0.6 - 1.2 C.c.,	10 -20 ♏.
Tinctura Serpentariæ,	3.7 - 7.5 C.c.,	1 - 2 fʒ.
Tinctura Stramonii Seminis,	0.6 - 1.2 C.c.,	10 -20 ♏.
Tinctura Strophanthi,	0.18- 0.5 C.c.,	3 - 8 ♏.
Tinctura Sumbul,	1.8 - 3.7 C.c.,	½ - 1 fʒ.
Tinctura Tolutana,	3.7 - 7.5 C.c.,	1 - 2 fʒ.
Tinctura Valerianæ,	3.7 -15.0 C.c.,	1 - 4 fʒ.
Tinctura Valerianæ Ammoniata,	1.8 - 3.7 C.c.,	½ - 1 fʒ.

	Dose.	
Tincturæ Vanillæ,	0.6 –1.8 C.c.,	10–30 ♏.
Tinctura Veratri Viridis,	0.06–0.5 C.c.,	1– 8 ♏.
Tinctura Zingiberis,	1.2 –3.7 C.c.,	20–60 ♏.

℞. Acidi hydrochlorici diluti, fʒij;
Tincturæ gentianæ compositæ, q. s. ad f℥iij.—Misce.
Sig. Teaspoonful in water before each meal.

℞. Tincturæ aconiti, ♏xvj;
Spiritus ætheris nitrosi, f℥ss;
Aquæ, q. s. ad ℥ij.—Misce.
Sig. Teaspoonful in water every hour.

℞. Tincturæ digitalis,
Tincturæ belladonnæ foliorum, *āā.* fʒij.—Misce.
Sig. Twenty drops every eight hours.

℞. Tincturæ cannabis indicæ, fʒiv;
Extracti gelsemii fluidi, ♏xlviij;
Acaciæ, ʒij;
Syrupi zingiberis, f℥ij;
Aquæ, q. s. ad f℥iv.—Misce.
Sig. Two teaspoonfuls every two hours.

36. TRITURATIONES.

(*Triturates.*)

Triturates are active remedies rubbed up with sugar of milk. They are dispensed in little powders. Sugar of milk, being very hard and gritty, and at the same time inert, furnishes a means of rubbing the substance to a very fine powder, which seems to make many substances more active. There is but one *official* triturate; it is composed of elaterin 1 part and sugar of milk 9 parts:

	Dose.	
Trituratio Elaterini,	0.021–0.043 Gm.,	⅓–⅔ gr.

℞. Triturationis elaterini,	gr. j;
Pulveris aromatici,	gr. xv.—Misce.

Fiant chartulæ No. ii.
Sig. One on the tongue at once.

℞. Hydrargyri chloridi mitis,	gr. j;
Sacchari lactis,	gr. ix.—Misce.

Tere et in chartulas No. x divide.
Sig. One every hour.

37. TROCHISCI.

(*Troches or Lozenges.*)

Troches are flat, round, triangular, or square-shaped solids intended to be dissolved in the mouth (Fig. 10). The *U. S. Pharmacopœia* directs that some of them be made of a cylindrical shape. Troches are prepared by rubbing the medicinal substance with "lozenge sugar" and powdered acacia or tragacanth, making this combination into a stiff mass, rolling the latter into sheets or cylinders of the desired thickness, and then cutting into lozenges with a lozenge-cutter or a spatula. Lozenges should not be made of drugs having a disagree-

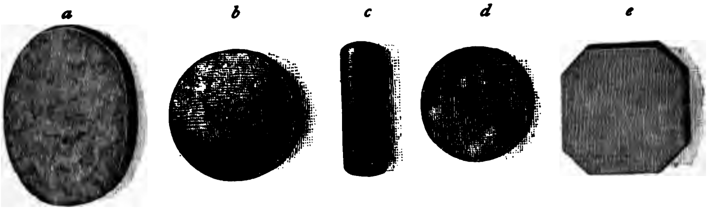

Fig. 10.—Troches of Different Shapes: *a*, oblong; *b*, circular disc; *c*, cylindrical; *d*, circular; *e*, octohedral.

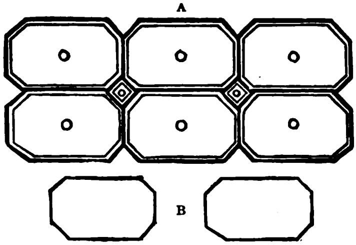

Fig. 11.—A, bottom appearance of a Lozenge-cutter; B, lozenges as shaped by the cutter.

able taste, nor of efflorescent, deliquescent, or caustic substances. The usual object of administering medicines in this form is to obtain the local action of the remedy upon the mucous membrane of the mouth and the pharynx, although some are used for their effect after being swallowed. Fifteen are *official*—namely:

	Dose.
Trochisci Acidi Tannici,	one as required.
Trochisci Ammonii Chloridi,	one as required.
Trochisci Cretæ,	one as required.
Trochisci Catechu,	one as required.
Trochisci Cubebæ,	one as required.
Trochisci Ferri,	one as required.
Trochisci Glycyrrhizæ et Opii,	one as required.
Trochisci Ipecacuanhæ,	one as required.
Trochisci Krameriæ,	one as required.
Trochisci Menthæ Piperitæ,	one as required.
Trochisci Morphinæ et Ipecacuanhæ,	one as required.
Trochisci Potassii Chloratis,	one as required.
Trochisci Santonini,	one or two night and morning.
Trochisci Sodii Bicarbonatis,	one as required.
Trochisci Zingiberis,	one as required.

The official lozenges are more frequently prescribed than those made extemporaneously. When prescribing those already made the name is to be written in the accusative case, followed by the number desired. The following prescriptions illustrate the method of prescribing official and extemporaneous troches:

℞. Trochiscos acidi tannici, xij.
Sig. Dissolve one on the tongue every two hours.

℞. Trochiscos santonini, iv.
Sig. Two night and morning.

℞. Ammonii chloridi,	ʒj ;
Extracti glycyrrhizæ,	ʒiiss ;
Tragacanthæ pulveratæ,	gr. v ;
Sacchari,	gr. xij ;
Syrupi tolutani,	q. s.—Misce.

Fiant trochisci xii.

Sig. Dissolve one in the mouth slowly every hour.

℞. Resinæ guaiaci,	gr. xij ;
Sacchari,	ʒij ;
Acaciæ,	q. s. ;
Spiritus aurantii compositæ,	q. s. ;
Aquæ anisi,	q. s.—Misce.

Fiant trochisci xii.

Sig. Dissolve one on the tongue every four hours.

38. UNGUENTA.

(*Ointments.*)

Ointments are soft, fatty solids of such consistency that they liquefy at the temperature of the body. They are intended to be applied by inunction. The basis for extemporaneous ointments may be lard, benzoinated lard, ointment (simple), hydrous wool-fat (lanolin), ointment of rose-water

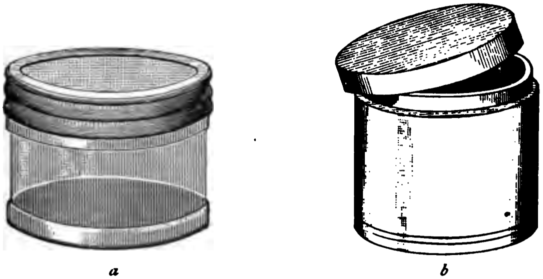

FIG. 12.—Glass (*a*) and Wooden (*b*) Ointment Boxes.

(cold cream), hard petrolatum, glycerite of starch, or boroglycerin. Ointments should be perfectly smooth; that is, they should not contain any undissolved, hard, or gritty particles. When it is desired to incorporate into an ointment a substance which is insoluble in the basis, it is often necessary to use a small quantity of alcohol, water, or glycerin as a solvent before mixing with the ointment-base. Thus in making an ointment containing resorcin the latter should first be rubbed well with a little alcohol, water, or glycerin before it is mixed with the basis; iodine may be readily dissolved by adding to it a small quantity of potassium iodide, then a few drops of water. The *official ointments* are—

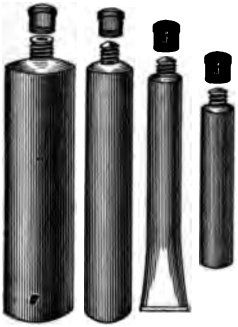

FIG. 13.—Collapsible Tubes in which to dispense ointments.

Unguentum.
Unguentum Acidi Carbolici.
Unguentum Acidi Tannici.
Unguentum Aquæ Rosæ (*Cold Cream*).
Unguentum Belladonnæ.
Unguentum Chrysarobini.
Unguentum Diachylon.
Unguentum Gallæ.
Unguentum Hydrargyri (*Blue Ointment*).
Unguentum Hydrargyri Ammoniati.
Unguentum Hydrargyri Nitratis (*Citrine Ointment*).
Unguentum Hydrargyri Oxidi Flavi.
Unguentum Hydrargyri Oxidi Rubri.
Unguentum Iodi.
Unguentum Iodoformi.
Unguentum Picis Liquidæ.
Unguentum Plumbi Carbonatis.

Unguentum Plumbi Iodidi.
Unguentum Potassii Iodidi.
Unguentum Stramonii.
Unguentum Sulphuris.
Unguentum Veratrinæ.
Unguentum Zinci Oxidi.

The following prescriptions are illustrative of ointments:

℞. Iodi,	gr. xx;
Potassii iodidi,	gr. xx;
Aquæ,	q. s.;
Adipis lanæ hydrosi,	℥ij.—Misce.

Fiat unguentum.
Sig. Apply night and morning.

℞. Resorcini,	gr. xv;
Alcoholis,	q. s.;
Unguenti aquæ rosæ,	℥j.—Misce.

Fiat unguentum.
Sig. Apply to spot on face three times a day.

℞. Unguenti belladonnæ,	
Unguenti iodoformi,	*āā.* ʒiv.—Misce.

Sig. Apply well before the bowels move.

℞. Olei terebinthinæ,	fʒij;
Unguenti hydrargyri,	℥j;
Adipis benzoinati,	q. s. ad ℥iv.—Misce.

Fiat unguentum.
Sig. Apply freely to abdomen.

39. VINA.

(*Wines.*)

Medicated wines are a class of liquid preparations in which white wine is used as a menstruum. Wines are all freely miscible in water and in alcohol. They are very similar to tinctures, but are not so strongly alcoholic. Ten wines, two of which are not medicated, are *official*—namely:

	Dose.		
Vinum Album,	as required.		
Vinum Antimonii (as expect.),	0.6– 1.8	C.c.,	10–30 ♏.
Vinum Colchici Radicis,	0.6– 1.8	C.c.,	10–30 ♏.
Vinum Colchici Seminis,	1.0– 3.7	C.c.,	16–60 ♏.
Vinum Ergotæ,	7.5–15.00	C.c.,	2– 4 fʒ.
Vinum Ferri Amarum,	3.7– 7.5	C.c.,	1– 2 fʒ.
Vinum Ferri Citratis,	3.7– 7.5	C.c.,	1– 2 fʒ.
Vinum Ipecacuanhæ,[1]	0.6– 1.8	C.c.,	10–30 ♏.
Vinum Opii (*Sydenham's Laudanum*),	0.3– 1.2	C.c.,	5–20 ♏.
Vinum Rubrum,	as required.		

The following prescriptions illustrate the manner of prescribing the wines:

℞. Vini ferri amari, f℥viij.
Sig. Tablespoonful after meals.

℞. Vini antimonii, fʒj;
Ammonii chloridi, ʒij;
Syrupi pruni virginianæ, fʒiv;
Aquæ, q. s. ad f℥ij.—Misce.
Sig. Tablespoonful in water every two hours.

℞. Vini colchici radicis, fʒiv;
Potassii iodidi, ʒiv;
Syrupi sarsap. comp., f℥j;
Aquæ, q. s. ad f℥iij.—Misce.
Sig. Teaspoonful after each meal.

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[1] As emetic, 1 ℥ for adult, 1 fʒ for child one or two years old.

PART IV.—DOSAGE.

MANY methods have been proposed to assist the student in memorizing the doses of various preparations; for instance, he is told that the doses of all the poisonous tinctures are from 5–10 drops, and then a list of exceptions are given, and the same method is followed for the doses of spirits, solutions, etc.; but the exceptions are so numerous as to entirely destroy the value of any such grouping of doses; in fact, it is believed that such methods are misleading if not, in reality, dangerous.

After carefully reviewing the various methods of grouping doses, we are firmly convinced that there is no easy method by which the student can be assisted in learning the doses of the numerous drugs and their preparations.

As there are many conditions which modify the quantity of medicine to be given, it is impossible to state the fixed and invariable dose of any drug. The doses in the following pages *are approximately the proper quantities for adults*, and, unless otherwise specified, are to be *given by the mouth.* When giving a powerful remedy to a patient for the first time, it is better to begin with the smaller dose, unless the urgency of the case demands that a large dose should be administered. The larger doses given may be insufficient to meet the requirements of many cases. As has been said by Prof. H. A. Hare, "The dose must vary to fit the case in the same manner that the cut of a coat must be varied to fit each individual." Some of the more important conditions that must be taken into consideration in deciding upon the quantity of medicine to be administered at one time are—the *age*, *weight*, *sex*, *temperament*, *climate*, *habits*, *disease*, and *idiosyncrasies* of the patient, and the *frequency* and *method of administering* the medicine.

Age.—The quantity of medicine for a child is less than than that for an adult, not only on account of a difference in weight, but also because children are more susceptible to all influences than are adults.

Several rules have been introduced for calculating the proper doses of medicines for children of different ages, all of which doses are fractions of the average dose for adults, but, as doses for adults vary according to the case, these rules are all of doubtful value.

The rule of Dr. Young is as follows: Add 12 to the age and divide the result by the age, to get the denominator of the fraction, the numerator of which is 1. Thus for a child six years old the denominator will be $6 + 12 = 18$, and the numerator will be 6. The proper dose will be $\frac{6}{6+12} - \frac{6}{18} = \frac{1}{3}$.

Dr. R. O. Cowling's rule is as follows: Divide the age of the child at its following birthday by 24; the quotient will be the fraction of the adult dose proper for the child. Thus for a child five years old the dose would be $6 \div 24 = \frac{1}{4}$ of the average adult dose.

The late Dr. E. H. Clark proposed the following method of calculating doses: He assumed 150 pounds to be the average weight of an adult. To obtain the correct dose for a child the weight of the latter is divided by 150, the quotient representing the fraction of the adult dose which is to be given. Thus the weight of a child 25 pounds, $25 \div 150 = \frac{1}{6}$. Therefore, one-sixth of the average adult dose is the correct quantity for a child weighing 25 pounds.

Whichever of these rules is followed, it should be remembered that, on the one hand, children bear opiates badly, and relatively smaller doses should be employed, while, upon the other hand, they require proportionately larger doses of belladonna and of purgatives.

Persons of advanced age require larger doses of opiates and stimulants, and smaller doses of depressants, than the average adult.

Bodily Weight.—While the bodily weight would furnish apparently a more certain method of accurately determining the question of dosage, there are so many other correlated conditions to be considered that it would prove erroneous to attempt to formulate a law governing doses based alone upon the weight of the patient; moreover, it is not always convenient to weigh the patient. If this method is practised, allowance should be made for such conditions as dropsies, pregnancy, and an excess of adipose tissue. The subject is one of considerable importance in questions relating to the proper quantities of medicines to be administered. It is customary, however, to administer smaller doses to a man or woman of small stature than to a large, muscular individual.

Sex.—Women usually require smaller doses than men. This difference in the sizes of the doses is doubtless due to the facts that women are generally smaller in stature and are more susceptible to the action of drugs than men, although requiring equally as large doses of purgatives and smaller amounts of stimulants. Pregnancy and menstruation modify the use of several classes of remedies.

Idiosyncrasies.—When a drug or other agent produces unusual symptoms or affects one person in a manner markedly different from the ordinary, the individual is said to have an *idiosyncrasy* to the drug or agent. There are many peculiar idiosyncrasies to different substances. Quinine in small doses may give rise to nausea, vertigo, blindness, deafness, or headache in persons having an idiosyncrasy to it.

Some persons develop urticaria if they eat strawberries, while a well-known physician of Philadelphia is immediately attacked with asthmatic symptoms upon inhaling the slightest particle of ipecac.

Temperament.—That temperament is one of the conditions which modify the size of the dose is shown by the fact that nervous blondes are more easily affected by medicines than are brunettes. This effect is very noticeable in the use of belladonna.

Climate.—Certain diseases seem to predominate under different climatic conditions, and without doubt the residents of hot and of cold climates respond to the action of certain medicines in a different degree. Thus, doses of quinine or of calomel that would manifest their effects only to a mild degree upon residents of a hot country produce rather decided disturbance in persons living in a cool country.

Habit.—The habits of a patient are of much importance in deciding upon the dose. Persons addicted to the use of alcoholic liquors, opium, or any other drug would require much larger quantities of these drugs to secure the physiological effect than a person whose system has not been accustomed to their habitual use. Persons inured to laborious physical work require larger doses of medicines than those surrounded with the luxuries of life.

Disease.—Doses are increased or decreased according to the severity of the disease and the urgency of the case, and whether it is desired to obtain a mild continuous action or an immediate decisive action of the drug, and as to what ultimate result is to be gained by its use. Larger doses of quinine are given to a patient suffering from pernicious malaria than to one having intermittent malarial fever. At the crisis of pneumonia, or in other conditions of shock, the urgency of the case demands much larger doses of strychnine or of other stimulants than would be required for a patient with but slight depression of circulation. Tincture of aconite would be given in much smaller doses to quiet the circulation and lower temperature in a simple acute fever than to abort an acute inflammation. Smaller quantities of syrup of ipecac or of tartar emetic would be given as an expectorant than for the purpose of producing emesis, and smaller doses of quinine would be given as a tonic rather than to break up an attack of malaria. Intercurrent diseases also have a bearing upon the quantity of medicine to be given. An acute inflammation complicated by cardiac hypertrophy would require larger doses of a circulatory sedative than cases in which the heart was not so affected.

Frequency of Administering.—Doses are sometimes spoken of as *single*, *continuous*, or *daily*. As may be inferred, these terms respectively refer to the quantities to be taken at one time, repeatedly, for some days, and to the total quantity required during twenty-four hours. The quantity in each dose would be much smaller when the dose is repeated at short intervals than if it is given at long intervals. Drugs that are very fleeting in their effect should be given at short intervals, while those that are slow to act, but continuous in their effect, should be given at long intervals.

Method of Administering.—As the quantity of medicine actually absorbed and the readiness with which it acts vary with the methods of administering, it will naturally be expected that doses will vary according to the method employed.

By the mouth is the most usual method of introducing medicines into the system, and unless otherwise specified the doses given in text-books and in other manuals are those that are intended to be administered in this way. Medicines are given by the mouth for their *local* effect on the mouth, pharynx, or gastro-intestinal tract, or for the purpose of being *absorbed* in the stomach or intestines for their *constitutional* effect, or to cause the expulsion of intestinal parasites. When *local effect upon the mouth* *or the pharynx* is desired, sufficient food and drink should be taken to satisfy the patient for an hour or two before the medicine is used, so that the agent may have a more prolonged action than if immediately washed off by a draught of water or if wiped off by the ingestion of food. The fact is often overlooked that remedies dissolved in the mouth and swallowed for their local effect upon the mouth and pharynx, upon reaching the stomach may be absorbed and affect the general system in a manner not desired. The truth of this assertion may be realized when attention is called to the fact that tons of potassium-chlorate lozenges are swallowed annually for the relief of "sore throat."

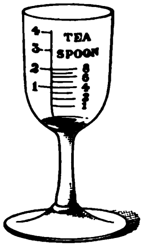

FIG. 14.—Medicine-glass.

Graduated medicine-glasses (Fig. 14) and medicine-droppers (Fig. 15) are great conveniences in the sick-room, and medicine-spoons (Fig. 16) made of glass, porcelain, or china-ware are convenient for administering medicines to children.

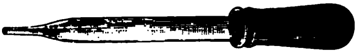
FIG. 15.—Medicine-dropper.

When *local action upon the stomach* is desired, medicines should be administered while this viscus is empty; therefore about an hour before meals is the usual time selected. If the medicine is to be *slowly absorbed from the stomach*, it should be given after meals, during the process of gastric digestion. If *absorption is expected to take place from the intestines*, the remedy should be administered at a time when gastric digestion is about completed and just as the partially-digested food is being swept from the stomach into the intestinal canal. About two or three hours after meals is the usual time selected for this purpose. Medicines intended to act *locally upon the intestines* are best given in hard pills. If given to act upon intestinal parasites, the patient should be deprived of food some hours before giving the drug, the latter being followed by a purgative. Liquid prescriptions containing iron, arsenic, or mineral acids should be freely diluted with water and taken through a glass tube, so as to prevent the injurious effects upon the teeth. In addition to the above precaution, the patient should be directed to use a mouth-wash of bicarbonate of soda in water immediately after taking the medicine.

The dose of a medicine given *hypodermatically* is generally stated to be only about one-half the quantity given by the mouth. This difference in quantity is necessary for the reason that the whole quantity is absorbed almost immediately, and the patient has therefore the entire dose acting at one time. Moreover, medicines so employed are not acted upon and partly destroyed by the liver before they have an opportunity to exert their action upon the system. Alkaloidal salts are well adapted for hypodermatic use, being active in very small quantities. Any substance, however, that is fairly soluble, non-irritating, and sufficiently clean not to produce ulceration may be given by this method. The hypodermatic needle should be sharp to prevent pain, and the syringe, needle, and medicine should be perfectly clean. In all cases care should be observed not unintentionally to inject the medicine into a vein.

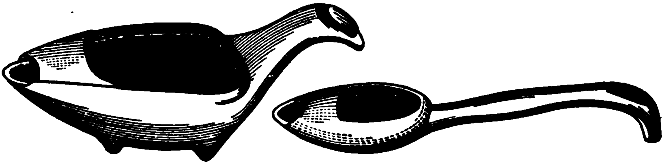

FIG. 16.—Medicine-spoons.

The medicine should be dissolved in ten, twenty, or thirty minims of water which has previously been boiled. This solution is drawn up into the syringe and the needle attached; then, having selected a fleshy part of the body, such as the back, the abdominal wall, the calf of the leg, or, more frequently, the extensor surface of the forearm, the tissues are pinched up between the thumb and finger of the left hand, and the needle quickly inserted, in a slanting direction, rather deeply into the loose connective tissue; the liquid is then slowly injected (Fig. 18). A very convenient method of obtaining boiled water is to place a little water in a spoon and hold it over a lamp or a gas-flame.

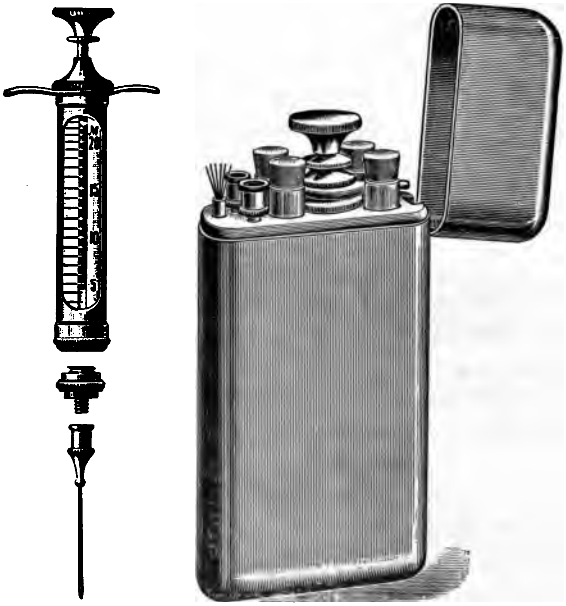

Fig. 17.—*a*, hypodermatic instrument; *b*, instrument with needles, wires, and tubes of hypodermic tablets in case.

Alcoholic liquids, such as brandy and whiskey, are frequently used hypodermatically, as are also some of the more powerful tinctures and fluid extracts, such as those of nux vomica, digitalis, or belladonna. Injections of spirit of ammonia or of aromatic spirit of ammonia are quite painful, and their use hypodermatically often produces sloughs; hence only in cases of emergency should they be used by this method. It is useless to give hypodermatic injections into the tissues of a person suffering with general anasarca, as the fluid will not be absorbed.

Ether and chloroform are best given in a syringe with a rubber valve, as they are likely to dissolve the oil from leather valves, and thereby produce sloughs and also injure the instrument.

Hypodermic instruments having a glass barrel or cylinder and a graduated piston or barrel, and so arranged that the valve may be tightened or loosened at will, are to be preferred to those composed entirely of metal.

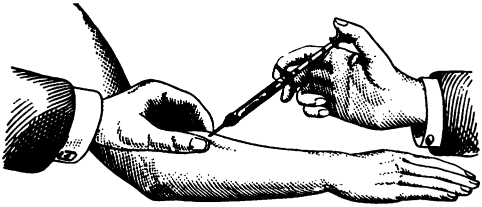

FIG. 18.—Method of giving Hypodermatic Injection.

The *endermatic* method of administering drugs consists in the production of a blister, the removal of the epidermis, and the sprinkling of the raw surface with the alkaloid. This method is now rarely used.

Inunctions.—As the quantity of medicine, when applied by inunction, that is actually absorbed from the skin cannot definitely be determined, it is difficult to fix any doses which would be approximate to the quantity given by the mouth. It is certain, however, that the quantity absorbed from the skin is very much less than that which would be absorbed when given by the mouth; consequently the quantity employed by inunction should be much larger. When using powerful remedies, such as the oleate of veratrine or aconitine, ointment of carbolic acid, or carbolized oil, care should be observed not to apply too freely, as deaths are recorded from the too liberal use of such powerful drugs. Absorption will take place from the skin more readily if the surface first be cleansed with hot water and soap before applying the remedy. In cases where inunctions are to be continued for a number of days, a different surface should be selected each day for the application of the agent. Thus, first day, under the left arm-pit; second day, inner side of left thigh; third day, inner side of right thigh; fourth day, under right axilla; fifth day, over the abdomen: the cycle may then be repeated. By following this or a similar method the skin will not become unduly inflamed. When the inunction is given for the purpose of causing the absorption of an enlarged gland, it should be applied only to the surface of the skin covering the gland. Occasionally the patient is permitted to wear a shirt or an abdominal band saturated with the medicinal substance.

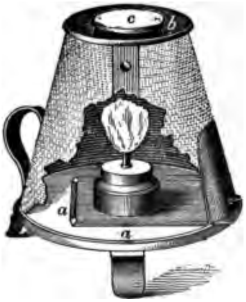

Fig. 19.—Fumigating Apparatus: *a*, alcohol lamp; *b*, reservoir for water; *c*, surface upon which to place the mercurial salt.

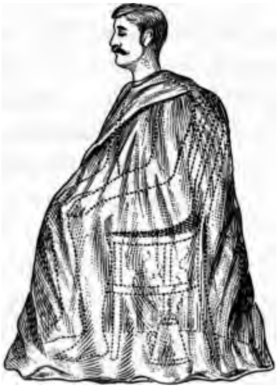

Fig. 20.—Patient receiving a Mercurial Fumigation.

Vapor-baths or *fumigations* are sometimes resorted to as a means of bringing about the absorption of mercurials by the skin. This method consists in covering the patient, stripped of all clothing, with a large blanket, which is fastened tightly around the neck and allowed to spread over the body like a tent (Fig. 20); the patient is then placed upon a cane-seated chair and steam is liberated under the blanket: when free perspiration is established, about half a drachm of calomel is sublimed by means of a specially-prepared apparatus (Fig. 19) or by an alcohol lamp placed in a basin of water and covered by a little stand made of tin, the vapor being allowed to surround the patient completely.

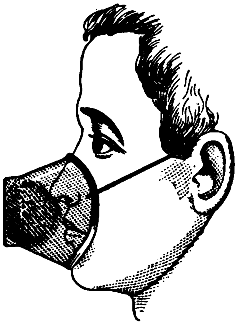

FIG 21.—Yoe Inhaler.

Inhalation is most largely resorted to as a means of producing general anæsthesia, but is also employed as a means of making applications to the upper air-passages and for introducing medicine into the general system (Fig. 21).

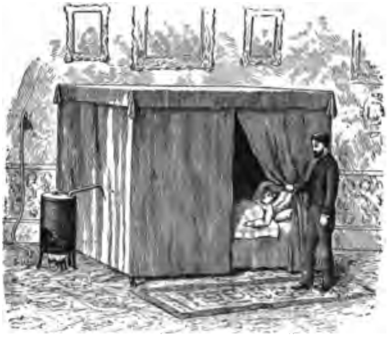

FIG. 22.—Bronchitis Tent.

Inhalations of steam laden with volatile substances, the vapor of thymol, creosote, the smoke from burning potassium-nitrate paper, and the vapor of sublimed calomel are frequently practised. It is impossible to fix the doses of these substances. For an adult the quantity of calomel employed in this manner is 4 or 5 grains. The face is to be held at a distance of eight or ten inches away from the cup from which the calomel is being vaporized. The "bronchitis tent," made by fastening sheets over a bed, under which steam can be constantly liberated, is a favorite method of keeping a patient in a moist, warm atmosphere, and is employed by many physicians (Fig. 22).

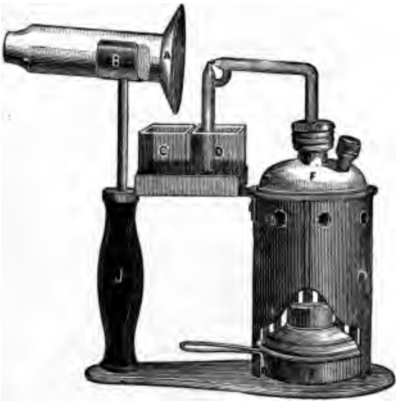

FIG. 23.—Steam Atomizer: A, inhalation-funnel; B, support; C, D, drip-cups; F, reservoir for water.

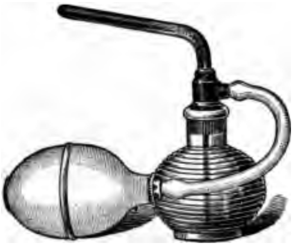

FIG. 24.—Bulb Atomizer

Atomization is largely employed as a means of applying medicines, in the form of a fine spray, to the upper air-passages. If it is intended that the vapor should reach the lungs, the spray should be very fine. Bulb (Fig. 24), steam (Fig. 23), and compressed-air atomizers are employed. The dose of medicine applied in this manner cannot be predetermined.

Medicines, foods, and hot and cold water are introduced into the *rectum* for the purpose of acting upon the general system, for local effect upon the rectum, as a means of nourishing the patient, to remove parasites and products of decomposition, to remove obstructions, and as a means of applying heat or cold to the body. Only soluble and non-irritating agents should be introduced into the rectum if they are intended for absorption, and, as the process of absorption is slow and imperfect, about twice as large a dose of a medicine is usually given by this method as would be given by the mouth. The rectum should be emptied by an enema before introducing into it either food or medicine intended for absorption. Foods should be in the form of liquids, slightly warmed and previously peptonized. Not more than two to four fluidounces of food should be introduced into the rectum of an adult at one time, as a larger quantity would be expelled, and many persons will retain only smaller quantities. Medicines may be administered by the rectum either in the form of suppositories (Fig. 8), rectal capsules, or in liquid preparations. Injections into the lower bowel are best made with a fountain syringe (Fig. 26), or by means of a reservoir elevated to the height of from one to two feet above the body of the patient. To this reservoir is attached a long rubber tube, upon the end of which is a rectal nozzle or a rubber catheter (Fig. 27). With proper care, one to three

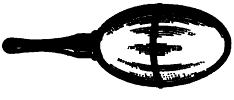
FIG. 25.—Infantile Syringe.

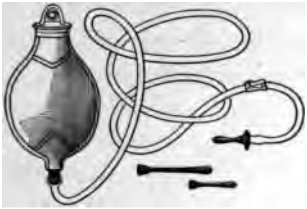
FIG. 26.—Fountain Syringe.

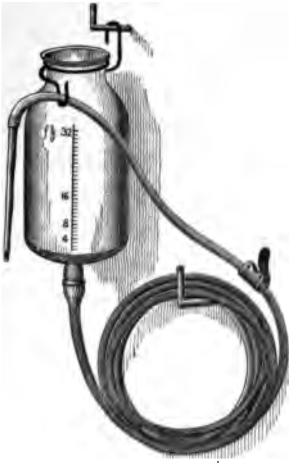

FIG. 27.—Reservoir Irrigation Apparatus.

quarts of water may be injected into the lower bowel of an adult, and from one to three pints into the bowel of a child, before expulsion takes place.

OFFICIAL AND OFFICINAL DRUGS AND PREPARATIONS.

The following is a list of the *official* drugs and preparations with their doses, and also of such newer remedies as are deserving of consideration. The Latin official name is given in bold-face type, followed in parentheses by the English official name and also by any synonym by which the drug may be known. The asterisk serves to distinguish all drugs and preparations that are not *official:*

Absinthium (Absinthium—Wormwood). The tops and leaves of *Artemisia Absinthium.*

Dose, 1.5–3.0 Gm., 23–46 gr.

Acacia (Acacia—Gum Arabic). A gummy exudation from *Acacia Senegal* and other species of Acacia. Soluble in water, but insoluble in alcohol. Excipient.

Dose, any quantity.

Mucilago Acaciæ. Vehicle or excipient.

Dose, 3.7–15.0 C.c., 1–4 fʒ or more.

Syrupus Acaciæ. Vehicle or excipient.

Dose, any quantity.

Acetanilidum (Acetanilid—Antifebrin). A white, laminated, crystalline powder, sparingly soluble in water.

Dose, 0.13–0.52 Gm., 2–8 gr.

Acetum Opii (Vinegar of Opium—Black Drop). About 10 ♏, or 0.6 C.c., are equal to 1 gr., or 0.06 Gm., of powdered opium. Sugar and nutmeg also enter into the formula.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Acetum Scillæ (Vinegar of Squill). About 10 ♏, or 0.6 C.c., are equal to 1 gr., or 0.06 Gm., of powdered squill. Used for making syrup of squill.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Acidum Aceticum (Acetic Acid). A liquid containing 36 per cent. of absolute acetic acid. Used locally as a counter-irritant.

Acidum Aceticum Dilutum (Diluted Acetic Acid). A liquid containing 6 per cent. of absolute acetic acid. Used for making official vinegars.

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Acidum Aceticum Glaciale (Glacial Acetic Acid). Nearly or quite absolute acetic acid. Used externally as a caustic.

Acidum Arsenosum (Arsenous Acid—White Arsenic). Occurs as transparent, glass-like, or as opaque, white, porcelain-like, irregular solid masses, and also as a heavy white powder.

Dose, 0.0016–0.0032 Gm., $\frac{1}{40}$–$\frac{1}{20}$ gr.

Acidum Benzoicum (Benzoic Acid). White or yellowish-white scales or needles, becoming somewhat darker upon exposure to light. Sparingly soluble in cold water.

Dose, 0.6–2.59 Gm., 10–40 gr.

Ammonii Benzoas.

Dose, 0.6–1.9 Gm., 10–30 gr.

**Antipyrini Benzoas.*

Dose, 0.3–1.9 Gm., 5–30 gr.

**Guaiacoli Benzoas.*

Dose, 0.3–0.6 Gm., 5–10 gr.

Lithii Benzoas.

Dose, 0.3–1.9 Gm., 5–30 gr.

Sodii Benzoas.

Dose, 0.6–1.9 Gm., 10–30 gr.

Acidum Boricum (Boric Acid—Boracic Acid). A white powder which is unctuous to the touch, and made up of translucent six-sided scales of a pearly lustre.

Dose, 0.13–1.0 Gm., 2–15 gr.

Glyceritum Boroglycerini. Used externally or as an excipient.

Sodii Boras.

Dose, 0.3–1.0 Gm., 5–15 gr.

***Acidum Camphoricum** (Camphoric Acid). A white crystalline powder, obtained by oxidizing camphor with nitric acid.

Dose, 1.3–3.9 Gm., 20–60 gr.

Acidum Carbolicum (Carbolic Acid—Phenol, Phenic Acid, Phenylic Alcohol). Colorless crystals obtained from coal-tar by fractional distillation and subsequent purification. Freely soluble in glycerin. Used internally and also as a caustic.

Dose, 0.03–0.06 C.c., ½–1 ♏.

Acidum Carbolicum Crudum (Crude Carbolic Acid). A colorless or reddish liquid, consisting of various constituents of coal-tar. Used as a disinfectant.

Glyceritum Acidi Carbolici.

Dose, 0.13–0.6 C.c., 2–10 ♏.

Unguentum Acidi Carbolici. Used externally.

Acidum Chromicum (Chromic Acid—Chromic Anhydride). Small, needle-shaped, reddish crystals, very deliquescent. Explosive when brought in contact with organic substances. Used locally as a caustic.

Potassii Bichromas.

Dose, 0.006–0.012 Gm., 1/10–1/5 gr.

Acidum Citricum (Citric Acid). A crystalline organic acid, usually prepared from lemon-juice. Efflorescent in dry air and deliquescent in moist air.

Dose, 0.3–1.0 Gm., 5–15 gr.

Syrupus Acidi Citrici.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Acidum Gallicum (Gallic Acid). A white or light-yellowish crystalline organic acid, usually prepared from tannic acid.

Dose, 0.13–2.59 Gm., 2–40 gr.

**Bismuthi Subgallas.*

Dose, 0.6–2.0 Gm., 10–31 gr.

Acidum Hydrobromicum Dilutum (Diluted Hydrobromic Acid). A liquid containing 10 per cent. by weight of hydrobromic acid.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Acidum Hydrochloricum (Hydrochloric Acid—Muriatic Acid). A liquid containing 31.9 per cent. by weight of absolute hydrochloric acid.

Dose, 0.12–0.6 C.c., 2–10 ♏.

Acidum Hydrochloricum Dilutum (Diluted Hydrochloric Acid—Diluted Muriatic Acid). A liquid containing 10 per cent. by weight of absolute hydrochloric acid.

Dose, 0.3–1.8 C.c., 5–30 ♏.

Acidum Hydrocyanicum Dilutum (Diluted Hydrocyanic Acid—Prussic Acid). A liquid containing 2 per cent. by weight of absolute hydrocyanic acid.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Potassii Cyanidum.

Dose, 0.0032–0.0065 Gm., $\frac{1}{20}$–$\frac{1}{10}$ gr.

Acidum Hypophosphorosum Dilutum (Diluted Hypophosphorous Acid). A liquid containing about 10 per cent. by weight of absolute hypophosphorous acid.

Dose, 0.3–0.6 C.c., 5–10 ♏.

Acidum Lacticum (Lactic Acid). An organic acid, usually obtained by subjecting milk-sugar or grape-sugar to lactic fermentation, and containing 75 per cent. by weight of absolute lactic acid.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Syrupus Calcii Lactophosphatis.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Acidum Nitricum (Nitric Acid—Aqua Fortis). A liquid containing 68 per cent. by weight of absolute nitric acid. Used internally, and also locally as a caustic.

Dose, 0.12–0.3 C.c., 2–5 ♏.

Acidum Nitricum Dilutum (Diluted Nitric Acid).

Dose, 0.6–2.0 C.c., 10–32 ♏.

Acidum Nitrohydrochloricum (Nitrohydrochloric Acid—Aqua Regia, Nitromuriatic Acid). Yellow fuming, corrosive liquid. Used internally, and also as a caustic.

Dose, 0.06–0.18 C.c., 1–3 ♏.

Acidum Nitrohydrochloricum Dilutum (Diluted Nitrohydrochloric Acid—Diluted Nitromuriatic Acid). A colorless or pale-yellowish liquid.

Dose, 0.6–1.2 C.c., 10–20 ♏.

Acidum Oleicum (Oleic Acid). An organic acid obtained by purifying commercial oleic acid. It is a yellowish oily liquid. Used locally, and also for making oleates.

Oleatum Hydrargyri. Used locally.

Oleatum Veratrinæ. Used locally.

Oleatum Zinci. Used locally.

Acidum Phosphoricum (Phosphoric Acid). A liquid containing not less than 85 per cent. of absolute orthophosphoric acid.

Dose, 0.12–0.5 C.c., 2–8 ♏.

Acidum Phosphoricum Dilutum (Diluted Phosphoric Acid). A liquid containing 10 per cent. of orthophosphoric acid.

Dose, 1.0–3.7 C.c., 16–60 ♏.

Acidum Salicylicum (Salicylic Acid). A white crystalline organic acid.

Dose, 0.3–1.0 Gm., 5–15 gr.

**Aspirin* (Acetyl-salicylic Acid).

Dose, 0.32–2.0 Gm., 5–30 gr.

**Antipyrini Salicylas.*
Dose, 0.3–1.9 Gm., 5–30 gr.
**Bismuthi Salicylas.*
Dose, 0.3–2.0 Gm., 5–31 gr.
**Guaiacoli Salicylas.*
Dose, 0.3–0.6 Gm., 5–10 gr.
**Hydrargyri Salicylas.*
Dose, 0.001–0.008 Gm., $\frac{1}{60}$–$\frac{1}{8}$ gr.
Lithii Salicylas.
Dose, 0.6–2.0 Gm., 10–31 gr.
Sodii Salicylas.
Dose, 0.6–2.0 Gm., 10–31 gr.
Salol.
Dose, 0.3–2.0 Gm., 5–31 gr.
**Salophen.*
Dose, 0.3–2.0 Gm., 5–31 gr.

Acidum Stearicum (Stearic Acid). An organic acid obtained from fats. Most frequently seen as a white glossy solid. Used in pharmaceutical preparations.

Acidum Sulphuricum (Sulphuric Acid—Oil of Vitriol). A liquid containing not less than 92.5 per cent. of absolute sulphuric acid.

Dose, 0.06–0.12 C.c., 1–2 ♏.

Acidum Sulphuricum Aromaticum (Aromatic Sulphuric Acid—Elixir of Vitriol). An aromatic alcoholic liquid containing 10 per cent. by volume (20 per cent. by weight) of official sulphuric acid, 5 per cent. by volume of tincture of ginger, and 1 per cent. by volume of oil of cinnamon.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Acidum Sulphuricum Dilutum (Diluted Sulphuric Acid). A liquid containing 10 per cent. by weight of absolute sulphuric acid.

Dose, 0.6–1.2 C.c., 10–20 ♏.

Acidum Sulphurosum (Sulphurous Acid). A liquid containing not less than 6.4 per cent. of sulphurous acid gas.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Acidum Tannicum (Tannic Acid). An organic acid obtained from nutgall. It is a light-yellowish, amorphous powder, gradually turning darker when exposed to air and light.

Dose, 0.13–0.6 Gm., 2–10 gr.

Collodium Stypticum. Used locally.

Glyceritum Acidi Tannici.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Trochisci Acidi Tannici.

Dose, 1–12 daily.

Unguentum Acidi Tannici. Used externally.

Acidum Tartaricum (Tartaric Acid). An organic acid prepared from argols.

Dose, 0.3–1.3 Gm., 5–20 gr.

***Acoin.** A white crystalline substance derived from guanin —a substance found in the cellular tissue of animals and vegetables. It is closely related to caffein and theobromin; soluble in water (1 : 8). Used as local anesthetic. The strength of the solution for local anesthesia is 1 : 1000 to 1 : 100.

Aconitum (Aconite—Monkshood, Wolfsbane). The tuber of *Aconitum Napellus.* Used for making pharmaceutical preparations.

**Aconitina.*

Dose, 0.0003–0.0006 Gm., $\frac{1}{200}$–$\frac{1}{100}$ gr.

Extractum Aconiti.

Dose, 0.01–0.016 Gm., $\frac{1}{6}$–$\frac{1}{4}$ gr.

Extractum Aconiti Fluidum.

Dose, 0.06–0.12 C.c., 1–2 ♏.

Tinctura Aconiti.

Dose, 0.06–0.3 C.c., 1–5 ♏.

*__Actol__ (Silver Lactate). A white, tasteless, odorless powder, soluble in water (1 : 20); used locally in the strength of from 1 : 8000 to 1 : 2000.

Dose, 0.065–0.32 Gm., 1–5 gr.

Adeps (Lard). Purified leaf lard. Used externally and also for making ointments and cerates.

Adeps Benzoinatus (Benzoinated Lard). Made by suspending 20 Gm. of benzoin in 1000 Gm. of melted lard for two hours and constantly stirring, and lastly straining. Ointment base.

Oleum Adipis (Lard Oil). Used externally.

Adeps Lanæ Hydrosus (Hydrous Wool-fat—Lanolin). The purified fat obtained from sheep's wool and mixed with about 30 per cent. of water. Used externally in ointments.

*__Adonidinum__ (Adonidin). A white crystalline glucoside obtained from *Adonis vernalis.*

Dose, 0.008–0.016 Gm., $\frac{1}{8}$–$\frac{1}{4}$ gr.

Æther (Ether—Æther Fortior, Pharm. 1880). A liquid containing about 96 per cent. by weight of absolute ether.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Æther Aceticus (Acetic Ether). A liquid containing about 98.5 per cent. by weight of absolute acetic ether and 1.5 per cent. of alcohol.

Dose, 0.3–1.8 C.c., 5–30 ♏.

Spiritus Ætheris.

Dose, 3.7–11.0 C.c., 1–3 fʒ.

Spiritus Ætheris Compositus.

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Spiritus Ætheris Nitrosi.

Dose, 0.6–3.7 C.c., 10–60 ♏.

***Æthyl Bromidum** (Ethyl Bromide). A colorless, very volatile liquid which is decomposed by light and air and becomes brown. Used as a general anæsthetic.

***Æthyl Chloridum** (Ethyl Chloride). A colorless, very volatile liquid having a strong ethereal odor. Used as a local anæsthetic.

***Æthyl Iodidum** (Ethyl Iodide). A colorless, volatile liquid with a penetrating odor. Decomposed by light and air. Dose by inhalation, 10 to 15 drops.

***Agaricinum** (Agaracin). A white crystalline or amorphous powder obtained from *Polyporus officinalis* (punk).

Dose, 0.065–0.130 Gm., 1–2 gr.

***Airol** (Bismuth-oxy-iodo-gallate). A greenish-gray, odorless, and tasteless powder. Insoluble in water and alcohol, but soluble in glycerin, weak alkalies, and acids. Used internally and locally as astringent and antiseptic.

Dose, 0.32–0.65 Gm., 5–10 gr.

Alcohol (Alcohol). A liquid containing about 91 per cent. by weight of ethyl alcohol. Used in pharmaceutical preparations, etc.

Alcohol Absolutum (Absolute Alcohol—Ethyl Alcohol). Alcohol containing not more than 1 per cent. of water. Used in pharmaceutical manipulations.

Alcohol Deodoratum (Deodorized Alcohol). A liquid containing 92.5 per cent. by weight of absolute ethyl alcohol. Used for pharmaceutical preparations.

Alcohol Dilutum (Diluted Alcohol). A liquid containing 41 per cent. by weight of absolute ethyl alcohol. Used for pharmaceutical preparations.

Allium (Garlic.) The bulb of *Allium sativum*.

Dose, 1.9–7.7 Gm., ½–2 ʒ.

Syrupus Allii.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Aloe Barbadensis (Barbadoes Aloes). The inspissated juice obtained from the leaves of *Aloe vera.*

Dose, 0.13–0.65 Gm., 2–10 gr.

Aloe Socotrina (Socotrine Aloes). The inspissated juice obtained from the leaves of *Aloe Perryi.*

Dose, 0.13–0.65 Gm., 2–10 gr.

Aloe Purificata (Purified Aloes). Prepared from Socotrine aloes.

Dose, 0.13–0.65 Gm., 2–10 gr.

Aloinum (Aloin). A yellowish crystalline neutral principle obtained from aloes.

Dose, 0.03–0.13 Gm., ½–2 gr.

Extractum Aloes (Extract of Aloes).

Dose, 0.03–0.3 Gm., ½–5 gr.

Pilulæ Aloes.

Dose, 1–3.

Pilulæ Aloes et Asafœtidæ.

Dose, 1–3.

Pilulæ Aloes et Ferri.

Dose, 1–3.

Pilulæ Aloes et Mastiches.

Dose, 1–3.

Pilulæ Aloes et Myrrhæ.

Dose, 1–3.

Tinctura Aloes.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Tinctura Aloes et Myrrhæ.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Althæa (Althæa—Marshmallow). The root of *Althæa officinalis.* Excipient in powdered form.

Syrupus Althæa.

Dose, 3.7–30.0 C.c., 1 fʒ–1 f℥.

***Aluminum.** A white, silvery metal.

Alumen (Alum—Potassium Alum, Aluminum, and Potas-

[illegible] Sulphate). Large, clear, colorless crystals or [illegible] which upon exposure to air absorb ammonia and become covered with a white coating.

Dose, [illegible] Gm., [illegible] as emetic; [illegible] Gm., [illegible] gr. for other conditions.

Alumen Exsiccatum (Dried Alum—Alumen Ustum, Burnt Alum). A white granular powder which attracts moisture upon exposure to the air. Used mostly externally as astringent and caustic.

Alumini Hydras (Aluminum Hydrate—Aluminium Hydroxide, Hydrated Alumina). A very light white powder insoluble in water or alcohol.

Dose, [illegible] Gm., [illegible] gr. Used also externally.

Alumini Sulphas (Aluminum Sulphate). A white crystalline mass or granular powder. Used externally.

Ammoniacum (Ammoniac). A gum-resin derived from *Dorema Ammoniacum*.

Dose, 0.65–1.9 Gm., 10–30 gr.

Emplastrum Ammoniaci cum Hydrargyro. Used externally.

Emulsum Ammoniaci.

Dose, 15.0–30.0 C.c., 1–4 fʒ.

***Ammonia** (NH_3). A volatile gas.

Aqua Ammoniæ.

Used locally, as counter-irritant.

Aqua Ammoniæ Fortior. Not used internally.

Linimentum Ammoniæ. Used externally by inunction.

Spiritus Ammoniæ.

Dose, 0.6–3.7 C.c., 10 ♏–1 fʒ, well diluted.

Spiritus Ammoniæ Aromaticus.

Dose, 0.6–3.7 C.c., 10 ♏–1 fʒ.

***Ammonium** (NH_4).

Ammonii Benzoas (Ammonium Benzoate). A white crystalline powder having a faint odor of benzoin.

Dose, 0.6–1.9 Gm., 10–30 gr.

Ammonii Bromidum (Ammonium Bromide). A white granular crystalline salt which attracts moisture in a damp atmosphere.

Dose, 0.6–3.9 Gm., 10–60 gr.

Ammonii Carbonas (Ammonium Carbonate). Transparent crystals, which upon exposure to air lose ammonia and carbon dioxide and crumble into a white powder. Is irritating to mucous membranes, and should always be well diluted with a liquid when administered.

Dose, 0.06–0.6 Gm., 1–10 gr.

Ammonii Chloridum (Ammonium Chloride). A white granular crystalline powder having a saline taste.

Dose, 0.3–1.0 Gm., 5–15 gr.

Trochisci Ammonii Chloridi.

Dose, 1, as required.

Ammonii Iodidum (Ammonium Iodide). A white granular crystalline powder, attracting moisture upon exposure to air, and also decomposing and becoming yellowish upon exposure to air.

Dose, 0.13–0.3 Gm., 2–5 gr. or more.

Ammonii Nitras (Ammonium Nitrate). Is usually seen in long colorless crystals or in fused masses. Deliquescent in air. Used for making nitrogen monoxide.

Ammonii Valerianas (Ammonium Valerianate). White crystalline plates, deliquescent in a moist atmosphere and efflorescent in a dry atmosphere.

Dose, 0.6–1.0 Gm., 10–15 gr.

Liquor Ammonii Acetatis.

Dose, 3.7–30.0 C.c., 1–8 f℥.

Amygdala Amara (Bitter Almond). The seed of bitter almond (*Prunus Amygdalus*). Used for making pharmaceutical preparations.

Aquæ Amygdalæ Amaræ.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Oleum Amygdalæ Amaræ.

Dose, 0.015–0.03 C.c., ¼–½ ♏.

Spiritus Amygdalæ Amaræ.

Dose, 0.18–0.6 C.c., 3–10 ♏.

Syrupus Amygdalæ.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Amygdala Dulcis (Sweet Almond). The seed of sweet almond (*Prunus Amygdalus*). Used or making pharmaceutical preparations.

Emulsum Amygdalæ.

Dose, 3.7–60.0 C.c., 1 fʒ–2 f℥.

Oleum Amygdalæ Expressum.

Dose, 3.7–30.0 C.c., 1 fʒ–1 f℥, or more.

Syrupus Amygdalæ.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Amyl Nitris (Amyl Nitrite). A very volatile liquid containing about 80 per cent. of amyl nitrite.

Dose internally or hypodermatically, 0.06–0.12 C.c., 1–2 ♏; by inhalation, 0.06–0.3 C.c., 1–5 ♏.

**Amyl Valerianate.* A volatile liquid. On account of of its solvent action on cholesterin, it has been employed with asserted success in the treatment of gallstones.

Dose, 0.065–0.32 Gm., 1–5 gr.

**Amylena Hydras* (Amylene Hydrate, Tertiary Amylic Alcohol). A colorless, hygroscopic liquid, with a peculiar camphoraceous odor. It is soluble in water (1 : 8), is freely miscible with alcohol, glycerin, and fatty oils. Used as a nervous sedative and hypnotic.

Dose, 1.0–4.0 C.c., 15–60 ♏.

Amylum (Starch). Starch obtained from seed of *Zea Mays.* Excipient and demulcent.

**Amylum Iodatum* (Iodized Starch). A deep-blue or nearly black powder.

Dose, 0.6–2.0 Gm., 10–31 gr.

Glyceritum Amyli. Excipient and locally.

***Anemoninum** (Anemonin). A crystalline principle obtained from *Anemone Pulsatilla.*

Dose, 0.01–0.03 Gm., 1/6–1/2 gr.

Anisum (Anise). The fruit of *Pimpinella Anisum.*

Dose, 0.32–0.65 Gm., 5–10 gr., in powder.

Aqua Anisi.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Oleum Anisi.

Dose, 0.12–0.3 C.c., 2–5 ♏.

Spiritus Anisi.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Anthemis (Anthemis—Chamomile). The flower-heads of *Anthemis nobilis*, collected from cultivated plants.

Dose, 1.9–3.8 Gm., ½–1 ʒ.

***Anthrarobinum** (Anthrarobin). A yellowish-white powder obtained from alizarin, a coal-tar product. Locally in ointment of 3 to 5 per cent.

***Anti-cholera Serum** (Yersin's Curative Serum). See also Haffkine's Prophylactic Vaccine, page 243. Used hypodermically.

Dose, 20.0–60.0 C.c., 5–15 fʒ.

***Anti-cholera Vaccine** (Haffkine's Prophylactic Plague Vaccine). Used hypodermically as prophylactic.

Dose, 2.0–3.0 C.c., 30–45 ♏.

***Anti-diphtheritic Serum** (Diphtheria Antitoxin). Used hypodermically.

Dose: To immunize, 500–1000 units; for treatment, 1000–5000 units.

***Anti-phthisic Serum.** Used hypodermically.

Dose, 0.65–4.0 C.c., 10–60 ♏.

***Anti-pneumococcic Serum** (Pane's Serum). Used hypodermically.

Dose, 10.0–20.0 C.c., 2½–5 fʒ.

***Anti-staphylococcic Serum.** Used hypodermically.

Dose, 5.0 C.c., 75 ♏.

***Anti-streptococcic Serum.** Used hypodermically.

Dose, 10.0–30.0 C.c., 2½–7½ fʒ.

***Anti-tetanic Serum** (Tetanus Antitoxin). Used hypodermically.

Dose, 10.0–30.0 C.c., 2½–7½ fʒ.

***Anti-tubercle Serum** (Anti-phthisic Serum). Used hypodermically.

Dose, 0.65–4.0 C.c., 10–60 ♏.

***Anti-venomous Serum** (Calmette's Serum). Used hypodermically.

Dose, 10.0–15.0 C.c., 2½–4 fʒ.

In severe cases it can be used up to 50.0 C.c., 12 fʒ.

***Antimonium** (Antimony). A grayish metal.

Antimonii et Potassii Tartras (Antimony and Potassium Tartrate—Tartar Emetic, Tartrated Antimony). A white, finely-granular powder.

Dose, 0.0032–0.006 Gm., $\frac{1}{20}$–$\frac{1}{10}$ gr., as expectorant; 0.032–0.065 Gm., ½–1 gr., as emetic.

Mistura Glycyrrhizæ Composita.

Dose, 3.7–15.0 Gm., 1–4 fʒ.

Syrupus Scillæ Compositus.

Dose, 0.6–3.7 C.c., 10–60 ♏, as expectorant; 3.7 C.c., 1 fʒ, as emetic for child.

Vinum Antimonii.

Dose, 0.6–1.8 C.c., 10–30 ♏, as sedative and expectorant; 15.0–30.0 C.c., ½–1 f℥, as emetic.

Antimonii Oxidum (Antimony Oxide—Antimony Trioxide). A heavy white or grayish-white powder.

Dose, 0.065–0.195 Gm., 1–3 gr. Rarely used internally.

Pulvis Antimonialis.

Dose, 0.3–0.6 Gm., 5–10 gr.

Antimonii Sulphidum (Antimony Sulphide—Antimony Trisulphide). Grayish-black powder, or dark-gray masses with metallic lustre.

Dose in veterinary practice, 0.6–1.8 Gm., 10–31 gr.

Antimonii Sulphidum Purificatum (Purified Antimony Sulphide—Purified Antimony Trisulphide). A grayish-black, heavy powder.

Dose, 0.016–0.065 Gm., ¼–1 gr.

Pilulæ Antimonii Compositæ.

Dose, 1 to 2 pills.

Antimonium Sulphuratum (Sulphurated Antimony—Kermes Mineral). A reddish-brown powder insoluble in water or alcohol.

Dose, 0.065–0.3 Gm., 1–5 gr., as emetic for child.

***Antipyrinum** (Antipyrine—Phenazone). A crystalline white powder.

Dose, 0.3–1.3 Gm., 5–20 gr.

**Antipyrini Benzoas* (Antipyrine Benzoate—Benzopyrine). A white crystalline powder.

Dose, 0.3–1.9 Gm., 5–30 gr.

**Antipyrini Salicylas* (Antipyrine Salicylate—Salipyrine). A white crystalline powder.

Dose, 0.3–1.9 Gm., 5–30 gr.

Apocynum (Apocynum—Canadian Hemp). The root of *Apocynum cannabinum.* Must not be confounded with Indian hemp.

Dose, 0.32–2.0 Gm., 5–31 gr.

Extractum Apocyni Fluidum.

Dose, 0.3–2.0 C.c., 5–32 ♏.

Apomorphinæ Hydrochloras (Apomorphinæ Hydrochlorate). An artificial alkaloidal salt made from morphine. Becomes green when exposed to light and air.

Dose, as emetic, 0.0065–0.013 Gm., $\frac{1}{10}$–$\frac{1}{5}$ gr.; as expectorant, 0.0016–0.0025 Gm., $\frac{1}{40}$–$\frac{1}{25}$ gr.

***Apiol** (Apiol). A colorless or reddish oily liquid obtained from the fruit of parsley.

Dose, 0.13–0.6 Gm., 2–10 gr.

Aqua (Water). Purest natural water.

Used as solvent.

Aqua Ammoniæ (Ammonia-water). Contains about 10 per cent. by weight of ammonia gas.

Used locally as counter-irritant.

Aqua Ammoniæ Fortior (Stronger Ammonia-water). Contains about 28 per cent. by weight of ammonia gas. Used locally as counter-irritant.

Aqua Amygdalæ Amaræ (Bitter-almond Water). Contains about 0.1 per cent. by volume of oil of bitter almond.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Aqua Anisi (Anise-water). Contains about 0.2 per cent. by volume of oil of anise.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Aqua Aurantii Florum (Orange-flower Water). Made by diluting stronger orange-flower water with an equal volume of distilled water.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Aqua Aurantii Florum Fortior (Stronger Orange-flower Water—Aqua Aurantii Florum, Pharm. 1880, Triple Orange-flower Water). Saturated solution of oil of orange-flowers, made by distillation.

Dose, 1.8–15.0 C.c., $\frac{1}{2}$–4 fʒ.

Aqua Camphoræ (Camphor-water). Contains about 0.8 per cent. of camphor.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Aqua Chlori (Chlorine-water). Contains about 0.4 per cent. of chlorine gas.

Dose, 3.7–7.5 C.c., 1–2 fʒ; also locally, as disinfectant.

Aqua Chloroformi (Chloroform-water). Distilled water saturated with chloroform.

Dose, 3.7–30.00 C.c., 1–8 fʒ.

Aqua Cinnamomi (Cinnamon-water). Contains about 0.2 per cent. of oil of cinnamon.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Aqua Creosoti (Creosote-water). Contains about 1 per cent. of creosote.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Aqua Destillata (Distilled Water). Used as a solvent.

Aqua Fœniculi (Fennel-water). Contains about 0.2 per cent. of oil of fennel.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Aqua Hydrogenii Dioxidi (Solution of Hydrogen Dioxide —Solution of Hydrogen Peroxide). Contains about 3 per cent. by weight of hydrogen dioxide.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Aqua Menthæ Piperitæ (Peppermint-water). Contains about 0.2 per cent. of oil of peppermint.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Aqua Menthæ Viridis (Spearmint-water). Contains about 0.2 per cent. of oil of spearmint.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Aqua Rosæ (Rose-water). Made by diluting stronger rose-water with an equal volume of distilled water.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Aqua Rosæ Fortior. Saturated solution of oil of rose-petals, made by distillation.

Dose, 1.8–15.0 C.c., ½–4 fʒ.

***Aqua Laurocerasi** (Cherry-laurel Water).

Dose, 1.8–3.7 C.c., ½–1 fʒ.

***Argentum** (Silver).

**Arganon.*—A white powder, said to contain 4 per cent. of silver casein, soluble in hot water. Used locally as an antiseptic-astringent. Usual strength of aqueous solutions for injections in gonorrhea, 2 per cent. increased to 10 per cent.

**Arganon, New.*—A light yellowish powder, sparingly soluble, but quite stable in water. Used as an antiseptic and astringent for injections in the treatment of gonorrhea. Usual strength for injections, 1 : 500 to 1 : 200.

**Argentannin.*—A liquid antiseptic and astringent preparation, consisting of a solution of silver phosphate, 10 per cent.; solution of ethylene-diamine, 10 per cent. Used locally in aqueous solutions of the strength of 1 : 5000 to 1 : 2000.

**Argenti Albuminas* (see *Largin*) Used locally in aqueous solutions in the strength of 1 : 500 to 1 : 75.

**Argenti Citras* (see *Itrol*). Used locally in aqueous solutions in the strength of 1 : 1000 to 1 : 4000.

Argenti Cyanidum (Silver Cyanide). White crystals, becoming brown upon exposure to light. Used only for making diluted hydrocyanic acid.

Argenti Iodidum (Silver Iodide). A light-yellow powder which upon exposure to light becomes greenish-yellow.

Dose, 0.016–0.130 Gm., ¼–2 gr.

**Argenti Lactas* (see *Actol*).

Dose, 0.065–0.32 Gm., 1–5 gr.

Argenti Nitras (Silver Nitrate). Clear, colorless crystals which become dark upon exposure to light in the presence of organic substances.

Dose, .010–.032 Gm., ⅙–½ gr.

Argenti Nitras Dilutus (Diluted Silver Nitrate—Mitigated Caustic). A white pencil- or cone-shaped solid. Used externally as caustic.

Argenti Nitras Fusus (Moulded Silver Nitrate—Lunar Caustic). A white pencil- or cone-shaped solid. Used externally as caustic.

Argenti Oxidum (Silver Oxide). A dark-brown or nearly black powder. "Should not be triturated with readily-oxidizable or combustible substances, and should not be brought in contact with ammonia."—*U. S. P.*

Dose, 0.032–0.065 Gm., ½–1 gr.

**Argentol* (Silver Oxy-chinolin-sulphonate). A yellowish powder sparingly soluble in water, used locally as a dressing for infected wounds and ulcers; also as injections in gonorrhea. The usual strength for ointments is 2 per cent.; for injections, 1 : 1000 to 1 : 500.

**Ichthargon.* Used locally in aqueous solutions in the strength of 0.02–0.2 per cent.

**Protargol* (Silver Proteid).

Dose, 0.32–0.13 Gm., ½–2 gr.

**Unguentum Credé* (Crédé's Ointment). Ointment of metallic soluble silver.

Dose, 1.0–4.0 Gm., 15–60 gr. by inunction.

***Aristol** (Dithymol-diiodide). A reddish-brown crystalline powder. Used locally as antiseptic.

Arnicæ Flores (Arnica-flowers). The flower-heads of *Arnica montana.*

Tinctura Arnicæ Florum.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Arnicæ Radix (Arnica-root). The rhizome and roots of *Arnica montana.*

Extractum Arnicæ Radicis.

Dose, 0.19–0.32 Gm., 3–5 gr.

Extractum Arnicæ Radicis Fluidum.

Dose, 0.3–0.6 C.c., 5–10 ♏.

Tinctura Arnicæ Radicis.

Dose, 1.2–1.8 C.c., 20–30 ♏.

***Arsenicum** (Arsenic). A steel-gray metal.

Acidum Arsenosum (Arsenous Acid—Arsenic Trioxide, White Arsenic).

Dose, 0.0016–0.0032 Gm., 1/40–1/20 gr.

Arseni Iodidum (Arsenic Iodide). Orange-red crystalline masses or scales.

Dose, 0.0022–0.0065 Gm., 1/30–1/10 gr.

Cupri Arsenis (Copper Arsenite).

Dose, 0.00032–0.00065 Gm., 1/200–1/100 gr.

Ferri Arsenas (Iron Arsenate).

Dose, 0.0032–0.0065 Gm., 1/20–1/10 gr.

Liquor Acidi Arsenosi (Solution of Arsenous Acid).

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Arseni Bromidi (Solution of Arsenic Bromide—[illegible] Solution).

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Arseni et Hydrargyri Iodidi (Solution of Arsenic and Mercuric Iodide—Donovan's Solution).

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Potassii Arsenitis (Solution of Potassium Arsenite—[illegible] Solution).

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Sodii Arsenatis (Solution of Sodium Arsenate—[illegible] Solution).

Dose, [illegible] ♏.

[illegible]

Dose, [illegible] Gm., [illegible] gr.

[illegible]

Dose, [illegible] Gm., ½–1½ gr.

Asafœtida (Asafetida). A gum-resin obtained from the root of *Ferula fœtida.*

Dose, 0.19–0.65 Gm., 3–10 gr.

Emulsum Asafœtidæ.

Dose, 15.0–30.0 C.c., 4–8 fʒ.

Pilulæ Aloes et Asafœtidæ.

Dose, 1–3.

Pilulæ Asafœtidæ.

Dose, 1–3.

Tinctura Asafœtidæ.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Asclepias (Asclepias—Pleurisy-root). The root of *Asclepias tuberosa.*

Dose, 1.3–3.9 Gm., 20–60 gr.

Extractum Asclepias Fluidum.

Dose, 1.2–3.7 C.c., 20–60 ♏.

Aspidium (Aspidium—Male Fern). The rhizome of *Dryopteris Filix-mas* and of *Dryopteris marginalis.*

Dose, 1.9–3.9 C.c., ½–1 ʒ.

Oleoresina Aspidii.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Aspidosperma (Aspidosperma—Quebracho). The bark of *Aspidosperma Quebracho blanco.*

Extractum Aspidospermatis Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

***Aspirin** (Acethyl-salicylic Acid). It occurs in white crystalline needles, sparingly soluble in water, and decomposes in the presence of alkalies. Used as an antirheumatic.

Dose, 0.32–2.0 Gm., 5–30 gr.

Atropina (Atropine). An alkaloid from belladonna.

Dose, 0.00032–0.00086 Gm., $\frac{1}{200}$–$\frac{1}{75}$ gr.

Atropinæ Sulphas (Atropine Sulphate). The sulphate of an alkaloid obtained from belladonna.

Dose, 0.00043–0.0016 Gm., $\frac{1}{150}$–$\frac{1}{40}$ gr.

Aurantii Amari Cortex (Bitter Orange-peel). The rind of the fruit of *Citrus vulgaris.*

Dose, 1.0–2.0 Gm., 15–31 gr

Extractum Aurantii Amari Fluidum.

Dose, 1.0–1.8 C.c., 16–30 ♏.

Tinctura Aurantii Amari.

Dose, 3.7–7.5 C.c., 1 2 fʒ.

Aurantii Dulcis Cortex (Sweet Orange-peel). The rind of the fresh fruit of *Citrus Aurantium.*

Dose, 1.0–2.0 Gm., 15–31 gr.

Oleum Aurantii.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Spiritus Aurantii.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Spiritus Aurantii Compositus. Used for making aromatic elixir.

Syrupus Aurantii.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Tinctura Aurantii Dulcis.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

***Aurantii Florum.** Not official, although the following preparations are derived from this source:

Aquæ Aurantii Florum.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Aquæ Aurantii Florum Fortior. Used for making orange-flower water.

Oleum Aurantii Florum. Flavoring agent.

Syrupus Aurantii Florum.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

***Aurum** (Gold).

**Auri Bromidum* (Gold Bromide). Orange-red crystals, very deliquescent.

Dose, 0.013–0.032 Gm., ⅕–½ gr.

**Auri Chloridum* (Gold Chloride). Orange-red crystals, very deliquescent.

Dose, 0.0006–0.0032 Gm., $\frac{1}{100}$–$\frac{1}{20}$ gr.

Auri et Sodii Chloridum (Gold and Sodium Chloride). A deliquescent, orange-yellow powder composed of equal parts of gold chloride and sodium chloride.

Dose, 0.0032–0.0064 Gm., $\frac{1}{20}$–$\frac{1}{10}$ gr.

Balsamum Peruvianum (Balsam of Peru). A balsam obtained from *Toluifera Pereiræ.*

Dose, 0.6–2.0 Gm., 10–31 gr.; also used externally.

Balsamum Tolutanum (Balsam of Tolu). A balsam obtained from *Toluifera Balsamum.*

Dose, 0.6–2.0 Gm., 10–31 gr.

Syrupus Tolutanus.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Tolutana.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

***Barium** (Barium).

**Barii Chloridum* (Barium Chloride). Clear, colorless crystals or white crystalline powder.

Dose, .0065–.065 Gm., $\frac{1}{10}$–1 gr.

Barii Dioxidum (Barium Dioxide—Barium Peroxide). A whitish or yellowish-white powder which upon exposure to the atmosphere attracts moisture and decomposes. Used only for making solution of hydrogen dioxide.

Belladonnæ Folia (Belladonna-leaves). The leaves of *Atropa Belladonna.*

Dose, 0.032–0.13 Gm., $\frac{1}{2}$–2 gr.

Atropinæ.

Dose 0.00032–0.00086 Gm., $\frac{1}{200}$–$\frac{1}{75}$ gr.

Atropinæ Sulphas.

Dose, 0.00043–0.0016 Gm., $\frac{1}{150}$–$\frac{1}{40}$ gr.

Emplastrum Belladonnæ. Used externally.

Extractum Belladonnæ Foliorum Alcoholicum.

Dose, 0.010–0.016 Gm., $\frac{1}{6}$–$\frac{1}{4}$ gr.

Tinctura Belladonnæ Foliorum.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Unguentum Belladonnæ. Used externally.

Belladonnæ Radix (Belladonna-root). The root of *Atropa Belladonna.*

Dose, 0.06–0.13 Gm., 1–2 gr.

Extractum Belladonnæ Radicis Fluidum.

Dose, 0.06–0.12 C.c., 1–2 ♏.

Linimentum Belladonnæ. Used externally.

***Benzanilidum** (Benzanilid—Benzoyl-anilide). A colorless, micaceous crystalline powder.

Dose, 0.19–0.6 Gm., 3–10 gr.

Benzinum (Benzin—Petroleum Benzin, Petroleum Ether). A purified distillate from American petroleum. Used as a solvent.

Benzoinum (Benzoin). A balsamic resin obtained from *Styrax Benzoin.*

Acidum Benzoinicum.

Dose, 0.65–2.59 Gm., 10–40 gr.

Adeps Benzoinatus. Used as an ointment base.

Tinctura Benzoini.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Tinctura Benzoini Composita.

Dose, 1.8–3.75 C.c., 30–60 ♏.

***Benzosolum** (Benzoyl-guaiacol—Benzosol). A colorless crystalline powder containing about 54 per cent. of guaiacol.

Dose, 0.3–0.6 Gm., 5–10 gr.

***Bismuthi.**

Bismuthi Citras (Bismuth Citrate). A white amorphous powder.

Dose, 0.13–0.3 Gm., 2–5 gr.

Bismuthi et Ammonii Citras (Bismuth and Ammonium Citrate). Small, white, shining scales.

Dose, 0.13–0.3 Gm., 2–5 gr.

**Bismuthi Oxidum* (Bismuth Oxide). A dull-yellow powder.

Dose, 0.3–0.6 Gm., 5–10 gr.

**Bismuth-oxy-iodo-gallate* (see *Airol*).

Dose, 0.32–0.65 Gm., 5–10 gr.

**Bismuthi Salicylas* (Bismuth Salicylate). A white or yellowish-white powder.

Dose, 0.3–2.0 Gm., 5–31 gr.

Bismuthi Subcarbonas (Bismuth Subcarbonate). A white or yellowish-white powder.

Dose, 0.6–4.0 Gm., 10–62 gr.

**Bismuthi Subgallas* (Bismuth Subgallate—Dermatol). A yellowish powder.

Dose, 0.3–0.6 Gm., 5–10 gr.

**Bismuthi Subiodidum* (Bismuth Subiodide). A heavy dark-red powder.

Dose, 0.06–0.13 Gm., 1–2 gr.

Bismuthi Subnitras (Bismuth Subnitrate). A heavy white powder.

Dose, 0.6–4.0 Gm., 10–62 gr.

**Orphol* (basic Bismuth-beta-naphtolate).

Dose, 0.32–0.65 Gm., 5–10 gr.

Bromum (Bromine). A brownish-red, very volatile liquid. Used as a caustic.

Acidum Hydrobromicum Dilutum.

Dose, 3.75–15.0 C.c., 1–4 fʒ.

Ammonii Bromidum.

Dose, 0.6–3.9 Gm., 10–60 gr.

**Auri Bromidum.*

Dose, 0.013–0.032 Gm., $\frac{1}{5}$–$\frac{1}{2}$ gr.

Calcii Bromidum.
Dose, 0.3–2.0 Gm., 5–31 gr.
Camphora Monobromata.
Dose, 0.065–0.3 Gm., 1–5 gr.
Hyoscinæ Hydrobromas.
Dose, 0.0006–0.0008 Gm., $\frac{1}{100}$–$\frac{1}{80}$ gr.
**Liquor Arseni Bromidi.*
Dose, 0.06–0.3 Gm., 1–5 ♏.
Lithii Bromidum.
Dose, 0.6–3.0 Gm., 10–47 gr.
Potassii Bromidum.
Dose, 0.3–3.9 Gm., 5–60 gr.
Quininæ Hydrobromas.
Dose, 0.06–1.0 Gm., 1–15 gr.
Sodii Bromidum.
Dose, 0.3–3.9 Gm., 5–60 gr.
Strontii Bromidum.
Dose, 0.3–1.9 C.c., 5–30 gr.
**Syrupus Acidi Hydrobromici.*
Dose, 3.7–15.0 C.c., 1–4 fʒ.
Zinci Bromidum.
Dose, 0.03–0.13 Gm., $\frac{1}{2}$–2 gr.

***Bromal Hydras** (Bromal Hydrate). A white crystalline substance with a pungent taste. Readily soluble in water.
Dose, 0.06–0.3 Gm., 1–5 gr.

***Bromipin.** A yellowish, oily liquid, made by the action of bromine upon oil of sesame. Used as a nervous sedative.
Dose, 2.0–4.0 C.c., $\frac{1}{2}$–1 fʒ.

***Bromoformum** (Bromoform). A clear, colorless liquid.
Dose, 0.06–0.3 C.c., 1–5 ♏.

***Bromol** (Tribromophenol). A white crystalline substance with sweetish, astringent taste. Insoluble in water.
Dose, 0.006–0.02 Gm., $\frac{1}{10}$–$\frac{1}{3}$ gr.

Bryonia (Bryonia—Bryony). The root of *Bryonia alba* and of *Bryonia dioica*.

Tinctura Bryoniæ.

Dose, 0.6–7.5 Cc., 10 ♏–2 fʒ.

Buchu (Buchu). The leaves of *Barosma betulina* and *Barosma crenulata*.

Dose, 1.9–3.9 Gm., ½–1 ʒ in infusion.

Extractum Buchu Fluidum.

Dose, 1.8–3.7 Cc., ½–1 fʒ.

***Cactus Grandiflorus** (Night-blooming Cereus).

Dose, 0.13–0.26 Gm., 2–4 gr.

**Extractum Cacti Grandiflori Fluidum.*

Dose, 0.12–0.24 Cc., 2–4 ♏.

**Tinctura Cacti Grandiflori.*

Dose, 0.12–0.5 Cc., 2–8 ♏.

Caffeina (Caffeine—Theine). Long white crystals, derived from tea or coffee.

Dose, 0.03–0.13 Gm., ½–2 gr.

Caffeina Citrata (Citrated Caffeine). A white powder.

Dose, 0.06–0.3 Gm., 1–5 gr.

Caffeina Citrata Effervescens (Effervescent Citrated Caffeine). A coarse, white, granular powder, effervescing upon addition to water.

Dose, 3.9–15.0 Gm., 1–4 ʒ.

Calamus (Calamus—Sweet Flag). The rhizome of *Acorus Calamus.*

Dose, 0.3–2.0 Gm., 5–31 gr.

Extractum Calami Fluidum.

Dose, 0.3–1.8 Cc., 5–30 ♏.

***Calcium.**

Calcii Bromidum (Calcium Bromide). A very deliquescent, white, granular salt.

Dose, 0.3–2.0 Gm., 5–31 gr.

Calcii Carbonas Præcipitatus (Precipitated Calcium Carbonate). A white, tasteless powder.

Dose, 0.65–2.6 Gm., 10–40 gr.

Calcii Chloridum (Calcium Chloride). Very deliquescent, translucent masses.

Dose, 0.13–1.0 Gm., 2–15 gr.

**Calcium Eosolate.* A creosote derivative. It is a gritty, grayish powder, with a slightly pungent, acrid taste. Soluble in water (1 : 10) and sparingly soluble in alcohol.

Dose, 0.32–0.60 Gm., 5–10 gr.

Calcii Hypophosphis (Calcium Hypophosphite). Colorless, transparent scales or a white crystalline powder.

Dose, 0.65–1.9 Gm., 10–30 gr.

Calcii Phosphas Præcipitatus (Precipitated Calcium Phosphate). A very light, white, amorphous powder.

Dose, 0.65–1.9 Gm., 10–30 gr.

Calcii Sulphas Exsiccatus (Dried Calcium Sulphate—Dried Gypsum). Used for fixed dressings.

Syrupus Calcii Lactophosphatis.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Syrupus Hypophosphitum.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Syrupus Hypophosphitis cum Ferro.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

***Calmette's Antivenomous Serum** (Calmette's Serum). Used hypodermically.

Dose, 10.0–15.0 C.c., 2½–4 fʒ. In severe cases it may be used up to 50.0 C.c., 12 fʒ.

Creta Præparata (Prepared Chalk).

Dose, 0.65–2.0 Gm., 10–31 gr.

Hydrargyrum cum Creta.

Dose, 0.065–0.6 Gm., 1–10 gr.

Pulvis Cretæ Compositus.

Dose, 0.3–2.0 Gm., 5–31 gr.

Mistura Cretæ.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Trochisci Cretæ.

Dose, 1 as required.

Calx (Lime). White masses which upon exposure attract moisture and crumble into a powder. Used for making preparations.

Calx Chlorata (Chlorinated Lime—Bleaching Powder). A white granular powder which gives off an odor of hypochlorous acid. Decomposes upon exposure. Disinfecting agent, containing 35 per cent. of available chlorine.

Calx Sulphurata (Sulphurated Lime—Crude Calcium Sulphide). A gray powder having the odor of hydrogen sulphide. Decomposes upon exposure.

Dose, 0.006–0.013 Gm., $\frac{1}{10}$–$\frac{1}{6}$ gr.

Linimentum Calcis. Used externally.

Liquor Calcis.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Potassæ cum Calce. Used locally as an escharotic.

Syrupus Calcis.

Dose. 3.7–30.0 C.c., 1–8 fʒ.

Calendula (Calendula—Marigold). The florets of *Calendula officinalis.*

Tinctura Calendulæ. Externally.

Calumba (Calumba—Columbo). The root of *Jatcorhiza palmata.*

Dose, 1.–3.9 Gm., 15–60 gr., in decoction.

Extractum Calumbæ Fluidum.

Dose, 1.–3.8 C.c., 16–60 ♏.

Tinctura Calumbæ.

Dose, 1.8–7.5 C.c., $\frac{1}{2}$–2 fʒ.

Cambogia (Gamboge). Gum-resin obtained from *Garcinia Hanburii.*

Dose, 0.016–0.3 Gm., ¼–5 gr.

Pilulæ Catharticæ Compositæ.

Dose, 1–3.

Camphora (Camphor). A volatile stearopten derived from *Cinnamomum Camphora.*

Dose, 0.03–0.19 Gm., ½–3 gr.

**Acidum Camphoricum.*

Dose, 1.3–3.9 Gm., 20–60 gr.

Aqua Camphoræ.

Dose, 3.7–15. C.c., 1–4 fʒ.

Ceratum Camphoræ. Used locally.

Linimentum Camphoræ. Used externally.

Linimentum Saponis. Used externally.

Spiritus Camphoræ.

Dose, 0.3–1.8 C.c., 5–30 ♏.

Tinctura Opii Camphorata.

Dose, 1.8–15.0 C.c., ½–4 fʒ.

Camphora Monobromata (Monobromated Camphor). Colorless prismatic needles or scales having a camphoraceous odor.

Dose, 0.065–0.3 Gm., 1–5 gr.

Cannabis Indica (Indian Cannabis—Indian Hemp). The flowering tops of the female plant of *Cannabis sativa,* grown in the East Indies.

Extractum Cannabis Indicæ.

Dose, 0.016–0.032 Gm., ¼–½ gr.

Extractum Cannabis Indicæ Fluidum.

Dose, 0.12–1.2 C.c., 2–20 ♏.

Tinctura Cannabis Indicæ.

Dose, 1.0–3.7 C.c., 16 ♏–1 fʒ.

Cantharis (Cantharides—Spanish Flies). The dried beetle *Cantharis vesicatoria.*

Ceratum Cantharidis. Used externally.

Collodium Cantharidatum. Used externally.

Emplastrum Picis Cantharidatum. Used externally.

Tinctura Cantharidis.

Dose, 0.06–0.6 C.c., 1–10 ♏.

Capsicum (Capsicum—Cayenne Pepper, African Pepper). The fruit of *Capsicum fastigiatum.*

Dose, 0.065–0.3 Gm., 1–5 gr.

Emplastrum Capsici. Used externally.

Extractum Capsici Fluidum.

Dose, 0.06–0.18 C.c., 1–3 ♏.

Oleoresina Capsici.

Dose, 0.016–0.06 C.c., ¼–1 ♏.

Tinctura Capsici.

Dose, 0.6–1.8 C.c., 10–30 ♏.

***Carbo** (Charcoal).

Carbo Animalis (Animal Charcoal). Used for making purified animal charcoal.

Carbo Animalis Purificatus. Used for pharmaceutical manipulation.

Carbo Ligni (Charcoal). Wood-charcoal finely powdered.

Dose, 0.3–3.9 Gm., 5–60 gr.

Carbonei Disulphidum (Carbon Disulphide—Carbonei Bisulphidum, U. S. Pharmacopœia of 1880). Used as a solvent.

Cardamomum (Cardamom). The ripe fruit of *Elettaria repens.*

Dose, 0.3–2.0 Gm., 3–31 gr.

Pulvis Aromaticus.

Dose, 0.6–2.0 Gm., 10–31 gr.

Tinctura Cardamomi.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Cardamomi Composita.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Carum (Caraway). The fruit of *Carum Carvi.*

Dose, 0.065–0.6 Gm., 1–10 gr.

Oleum Cari.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Caryophyllus (Cloves). The unexpanded flowers of *Eugenia aromatica.*

Dose, 0.065–0.6 Gm., 1–10 gr.

Oleum Caryophylli.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Cascarilla (Cascarilla). The bark of *Croton Eluteria.*

Dose, 0.06–2.0 Gm., 10–31 gr.

Cassia Fistula (Cassia Fistula—Purging Cassia). The fruit of *Cassia Fistula.*

Dose, 3.9–7.8 Gm., 1–2 ʒ.

Confectio Sennæ.

Dose, 3.9–7.8 Gm., 1–2 ʒ.

Castanea (Castanea—Chestnut-leaves). The leaves of *Castanea dentata.*

Dose, 3.9–7.8 Gm., 1–2 ʒ, in infusion.

Extractum Castaneæ Fluidum.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Catechu (Catechu). An extract from the wood of *Acacia Catechu.*

Dose, 0.6–2.0 Gm., 10–31 gr.

Tinctura Catechu Composita.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Trochisci Catechu.

Dose, 1 as required.

Caulophyllum (Caulophyllum—Blue Cohosh). The rhizome and roots of *Caulophyllum thalictroides.*

Dose, 0.6–2.0 Gm., 10–31 gr., in decoction.

**Extractum Caulophylli Fluidum.*

Dose, 0.6–2.0 C.c., 10–32 ♏.

Cera Alba (White Wax—Bleached Wax). Used for making pharmaceutical preparations.

Cera Flava (Yellow Wax). A concrete substance prepared from the honeycomb of bees. Used for making pharmaceutical preparations.

Ceratum (Cerate). Contains 30 per cent. of white wax and 70 per cent. of lard. Used as a base for compound cerates and ointments.

Ceratum Camphoræ (Camphor Cerate). Contains 10 per cent. of camphor liniment, 30 per cent. of white wax, and 60 per cent. of lard. Used locally and as a base for cerate of lead subacetate.

Ceratum Cantharidis (Cantharides Cerate). About 32 per cent. of cantharides, 18 per cent. of yellow wax, 18 per cent. of resin, 22 per cent. of lard, and 15 per cent. of oil of turpentine are used in its manufacture. Used locally as an epispastic.

Ceratum Cetacei (Spermaceti Cerate). Composed of 10 per cent. of spermaceti, 35 per cent. of white wax, and 55 per cent. of olive oil. Used as a base for compound cerates.

Ceratum Plumbi Subacetatis (Cerate of Lead Subacetate—Goulard's Cerate). Contains 20 per cent. of solution of lead subacetate and 80 per cent. of camphor cerate. Used locally.

Ceratum Resini (Resin Cerate—Basilicon Ointment). Contains resin, 35 per cent.; yellow wax, 15 per cent.; lard, 50 per cent. Good excipient for making pills of potassium permanganate. Used locally.

Cerii Oxalas (Cerium Oxalate). A white, granular, tasteless powder insoluble in water or alcohol.

Dose, 0.065—0.6 Gm., 1–10 gr.

Cetaceum (Spermaceti). A peculiar concrete, fatty substance obtained from *Physeter macrocephalus.*

Ceratum Cetacei. Used externally.

Unguentum Aquæ Rosæ. Used externally.

Cetraria (Cetraria—Iceland Moss). The *Cetraria islandica.*

Decoctum Cetrariæ.

Dose, 60.00–118.00 C.c., 2–4 f℥.

Charta Potassii Nitratis (Potassium-nitrate Paper). Strips of white unsized paper charged with potassium nitrate, made by dipping the strips of paper in a saturated solution of potassium nitrate and drying. To be used by burning and inhaling fumes.

Charta Sinapis (Mustard Paper). Pieces of well-sized paper coated upon one side with ground black mustard previously deprived of its oil. Each six square centimetres of the paper should be coated with about 4 Gm. of the mustard. Used as a counter-irritant.

Chelidonium (Chelidonium—Celandine). The entire plant, *Chelidonium majus.*

Dose, 0.6–1. Gm., 10–15 gr.

Chenopodium (Chenopodium—American Wormseed). The fruit of *Chenopodium ambrosioides,* variety *anthelminticum.*

Dose, 1.3–2.0 Gm., 20–31 gr.

Oleum Chenopodii.

Dose, 0.3–0.6 C.c., 5–10 ♏.

Chimaphila (Chimaphila—Pipsissewa). The leaves of *Chimaphila umbellata.*

Extractum Chimaphilæ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

***Chinoidinum** (Chinoidine). In deep-brown or black masses or cylindrical rolls having the appearance somewhat of resin. It consists of uncrystallizable cinchona alkaloids.

Dose, 0.3–2.0 Gm., 5–31 gr.

Chirata (Chirata). The plant of *Swertia Chirata.*

Dose, 0.65–1.95 Gm., 10–31 gr.

Extractum Chiratæ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Chiratæ.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Chloral (Chloral Hydrate). In large clear crystals or crystalline masses which slowly volatilize in dry air and attract moisture in a damp atmosphere.

Dose, 0.3–2.0 Gm., 5–31 gr.

**Chloral Butylicum* (Butyl-chloral Hydrate). In white crystalline scales. In solution is gradually decomposed; consequently solutions should only be made when it is to be taken at once.

Dose, 0.3–1.9 Gm., 5–30 gr.

**Chloralose* (Chloralose). A white crystalline substance used as a hypnotic.

Dose, 0.13–0.5 Gm., 2–7 gr.

**Chloralum Formamidatum* (Chloral Formamide—Chloralamide). In white, lustrous, crystalline scales. Hot water causes its decomposition.

Dose, 0.6–3.9 Gm., 5–60 gr.

***Chloretone** (Trichlor-tertiary-butyl-alcohol — Acetone Chloroform). A white crystalline substance, with a camphoraceous odor and taste; sparingly soluble in cold water (1 : 100), but freely soluble in boiling water, alcohol, chloroform, and ether. Used internally as a nervous sedative and hypnotic, and locally as an anesthetic and antiseptic.

Dose, 0.13–0.65 Gm., 2–10 gr.

Chloroformum (Chloroformum—Chloroformum Purificatum, Pharm. 1880). A liquid containing 99 per cent. of absolute chloroform.

Aqua Chloroformi.
Dose, 3.7–30.0 C.c., 1–8 f℥.

Emulsum Chloroformi.
Dose, 1.0–15.0 C.c., 1–4 f℥.

Linimentum Chloroformi. Used externally.

Spiritus Chloroformi.
Dose, 0.3–2.0 C.c., 5–32 ♏.

***Chlorum** (Chlorine). A very irritating gas of yellowish-green color.

Aqua Chlori. Contains 0.4 per cent. of chlorine.
Dose, 1.8–7.5 C.c., ½–2 f℥.

Calx Chlorata. Contains 35 per cent. of available chlorine. Disinfectant.

Liquor Sodæ Chloratæ. Contains 2.6 per cent. of chlorine.
Dose, 0.60–1.8 C.c., 10–30 ♏.

Chondrus (Chondrus—Irish Moss, Carragheen). The sea-algæ *Chondrus crispus* and *Gigartina mamillosa.*
Dose, 15.0–31.0 Gm., ½–1 ℥, in decoction.

Chrysarobinum (Chrysarobin). The neutral principle from Goa powder.
Dose, 0.008–0.065 Gm., ⅛–1 gr.

Unguentum Chrysarobini. Used externally.

Cimicifuga (Cimicifuga—Black Snake-root). The rhizome and roots of *Cimicifuga racemosa.*

Extractum Cimicifugæ.
Dose, 0.065–0.32 Gm., 1–5 gr.

Extractum Cimicifugæ Fluidum.
Dose, 0.6–1.8 C.c., 10–30 ♏.

Tinctura Cimicifugæ.
Dose, 3.7–7.5 C.c., 1–2 f℥.

Cinchona (Cinchona—Peruvian Bark). Bark of *Cinchona Calisaya* and *C. officinalis*, and other cinchona barks yielding not less than 5 per cent. of the total alkaloids and at least 2.5 per cent. of quinine.

Dose, 0.65–3.8 Gm., 10–60 gr., in decoction.

**Chinoidinum* (Chinoidine). An amorphous mixture of alkaloids obtained from cinchona.

Dose, 0.3–2. Gm., 5–31 gr.

Cinchonidinæ Sulphas (Cinchonidine Sulphate). The sulphate of an alkaloid obtained from cinchona.

Dose, 0.3–1. Gm., 5–15 gr., or more.

Cinchonina (Cinchonine). An alkaloid of cinchona.

Dose, 0.3–0.6 Gm., 5–10 gr., or more.

Cinchoninæ Sulphas (Cinchonine Sulphate).

Dose, 0.3–1.0 Gm.; 5–15 gr., or more.

Extractum Cinchonæ.

Dose, 0.65–.32 Gm., 5–10 gr.

Extractum Cinchonæ Fluidum.

Dose, 1.0–1.8 C.c., 16–30 ♏.

Ferri et Quininæ Citras.

Dose, 0.3–0.65 Gm., 5–10 gr.

Ferri et Quininæ Citras Solubilis.

Dose, 0.3–0.65 Gm., 5–10 gr.

Infusum Cinchonæ.

Dose, 15.0–60.0 C.c., 4–16 fʒ.

Quinidinæ Sulphas (Quinidine Sulphate).

Dose, 0.3–1.0 Gm., 5–15 gr., or more.

Quinina (Quinine).

Dose, 0.13–0.5 Gm., 2–7 gr., or more.

Quininæ Bisulphas (Quinine Bisulphate).

Dose, 0.065–1.0 Gm., 1–15 gr., or more.

Quininæ Hydrobromas (Quinine Hydrobromate).

Dose, 0.065–1.0 Gm., 1–15 gr., or more.

Quininæ Hydrochloras (Quinine Hydrochlorate).

Dose, 0.065–1.0 Gm., 1–15 gr., or more.

**Quininæ Hydrochloras Carbamidata* (Quinine Carbamide Hydrochlorate). The double salt of quinine and urea.

Dose, 0.065–1.0 Gm., 1–15 gr., or more.

Quininæ Sulphas (Quinine Sulphate).

Dose, 0.065–0.6 Gm., 1–10 gr., or more.

**Quininæ Tannas* (Quinine Tannate).

Dose, 0.065–1.3 Gm., 1–20 gr., or more.

Quininæ Valerianas (Quinine Valerianate).

Dose, 0.065–0.6 Gm., 1–10 gr., or more.

Syrupus Ferri, Quininæ et Strychninæ Phosphatum.

Dose, 3.7 C.c., 1 fʒ.

Tinctura Cinchonæ.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Pyrexialis (Warburg's Tincture).

Dose, 15.0–30.0 c.c,, 4–8 fʒ.

Cinchona Rubra (Red Cinchona).

Dose, 3.8–7.5 C.c., 1–2 ʒ.

Tinctura Cinchonæ Composita.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Cinnamomum Cassia (Cinnamomum, Pharm. 1880—Cassia-bark). The bark of several species grown in China.

Dose, 0.065–0.6 Gm., 1–10 gr.

Aquæ Cinnamomi.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Oleum Cinnamomi.

Dose, 0.06–0.18 C.c., 1–3 ♏.

Spiritus Cinnamomi.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Cinnamomum Saigonicum (Saigon Cinnamon). The bark of an undetermined species of *Cinnamomum.*

Dose, 0.065–0.6 Gm., 1–10 gr.

Cinnamomum Zeylanicum (Ceylon Cinnamon—Cinnamomum, Pharm. 1880). The inner bark of the shoots of *Cinnamomum zeylanicum.*

Dose, 0.065–0.6 Gm., 1–10 gr.

Extractum Aromaticum Fluidum.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Pulvis Aromaticus.

Dose, 0.6–2.0 Gm., 10–31 gr.

Tinctura Cinnamomi.

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Coca (Coca—Erythroxylon, Pharm. 1880). The leaves of *Erythroxylon Coca.*

Dose, 1.9–7.8 Gm., 30–60 gr.

Cocainæ Hydrochloras (Cocaine Hydrochlorate). The hydrochlorate of an alkaloid obtained from coca. It should be in white crystals.

Dose, 0.016–0.13 Gm., $\frac{1}{4}$–2 gr.

**Cocainæ Phenas* (Cocaine Phenate). The phenate of an alkaloid obtained from coca.

Dose, 0.016–0.13 Gm., $\frac{1}{4}$–2 gr.

Extractum Cocæ Fluidum.

Dose, 1.8–7.5 C.c., $\frac{1}{2}$–2 fʒ.

Coccus (Cochineal). The dried female of *Coccus cacti.* Used as a coloring agent.

Codeina (Codeine). An alkaloid obtained from opium.

Dose, 0.03–0.13 Gm., $\frac{1}{2}$–2 gr.

Colchici Radix (Colchicum-root). The corm of *Colchicum autumnale.*

Dose, 0.13–0.52 Gm., 2–8 gr.

**Colchiceina* (Colchiceine). A whitish crystalline, nitrogenous substance made from colchicine.

Dose, 0.001–0.002 Gm., $\frac{1}{64}$–$\frac{1}{32}$ gr.

**Colchicina* (Colchicine). A colorless or yellow amorphous, nitrogenous substance derived from colchicum-root.

Dose, 0.0005–0.0006 Gm., $\frac{1}{120}$–$\frac{1}{100}$ gr.

Extractum Colchici Radicis.
Dose, 0.032–0.13 Gm., ½–2 gr.
Extractum Colchici Radicis Fluidum.
Dose, 0.12–0.24 C.c., 2–4 ♏.
Vinum Colchici Radicis.
Dose, 0.6–1.8 C.c., 10–30 ♏.

Colchici Semen (Colchicum-seed). The seed of *Colchicum autumnale.*
Dose, 0.13–0.52 Gm., 2–8 gr.
Extractum Colchici Seminis Fluidum.
Dose, 0.12–0.3 C.c., 2–5 ♏.
Tinctura Colchici Seminis.
Dose, 1.8–3.7 C.c., ½–1 f℥.
Vinum Colchici Seminis.
Dose, 1.0–3.7 C.c., 16–60 ♏.

***Coley Mixture** of erysipelas and prodigiosus toxins. Used hypodermically.
Dose, 0.03 C.c., ½ ♏, as initial dose.

Collodium (Collodion). Used externally.

Collodium Cantharidatum (Cantharidal Collodion—Blistering Collodion). Used externally.

Collodium Flexile (Flexible Collodion). Used externally.

Collodium Stypticum (Styptic Collodion). Contains 20 per cent. of tannic acid. Used externally.

Colocynthis (Colocynth). The fruit of *Citrullus Colocynthis.*
Extractum Colocynthidis.
Dose, 0.13–0.32 Gm., 2–5 gr.
Extractum Colocynthidis Compositum.
Dose, 0.32–1.29 Gm., 5–20 gr., as a purge.

***Condurango Cortex** (Condurango). The bark of *Gonolobus Condurango.*
Dose, 3.9–7.8 Gm., 1–2 ℥, in decoction.
**Extractum Condurango Fluidum.*
Dose, 3.5–7.5 C.c., 1–2 f℥.

Confectio Rosæ (Confection of Rose). Contains 8 per cent. of red rose, 64 per cent. of sugar, 12 per cent. of clarified honey, and 16 per cent. of stronger rose-water. The confection is most frequently used as an excipient.

Dose, any quantity.

Confectio Sennæ (Confection of Senna). The following quantities of each ingredient enter into the manufacture of each 100 Gm. of this confection: Senna, 10 Gm.; cassia, 16 Gm.; tamarind, 10 Gm.; prune, 7 Gm.; fig, 12 Gm.; sugar, 55.5 Gm.; oil of coriander, .5 Gm.; and water, q. s.

Dose, 7.8 Gm., 2 ʒ.

Conium (Conium—Hemlock). The full-grown fruit of *Conium maculatum*, gathered while green.

**Coniinæ Hydrobromas* (Coniine Hydrobromate). The crystalline hydrobromate of the liquid alkaloid of conium.

Dose, 0.0006–0.003 Gm., $\frac{1}{100}$–$\frac{1}{20}$ gr.

Extractum Conii.

Dose, 0.032–0.65 Gm., ½–1 gr.

Extractum Conii Fluidum.

Dose, 0.12–0.36 C.c., 2–6 ♏.

**Succus Conii.*

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Convallaria (Convallaria—Lily of the Valley). The rhizome and roots of *Convallaria majalis.*

**Convallamarinum* (Convallamarin). A whitish or yellowish crystalline or amorphous glucoside derived from convallaria.

Dose, 0.065–0.12 Gm., ½–1 gr.

**Convallarinum* (Convallarin). An acrid principle derived from convallaria.

Dose, 0.03–0.065 Gm., ½–1 gr.

Extractum Convallariæ Fluidum.
Dose, 0.24–0.5 C.c., 4–8 ♏.

***Cotarnin Hydrochloride** (Stypticin).
Dose, 0.1–0.25 Gm., 1½–4 gr.

Copaiba (Copaiba—Balsam of Copaiba). The oleoresin of several species of *Copaifera.*
Dose, 0.6–2.0 C.c., 10–32 ♏.

Massa Copaibæ.
Dose, 0.6–4.0 Gm., 10–62 gr.

Oleum Copaibæ.
Dose, 0.3–1.0 C.c., 5–16 ♏.

Resina Copaibæ.
Dose, 0.6–1.2 Gm., 10–20 gr.

Coriandrum (Coriander). The fruit of *Coriandrum sativum.*
Dose (in powder), 0.3–0.6 Gm., 5–10 gr.

Oleum Coriandri.
Dose, 0.06–0.3 C.c., 1–5 ♏.

***Creolinum** (Creolin). A black or dark-brown syrupy liquid obtained from coal-tar. Used as an aseptic in ½–2 per cent. solutions.

Creosotum (Creosote). A colorless, oily liquid consisting of a mixture of phenols, chiefly guaiacol and creosol, obtained during the distillation of beechwood tar.
Dose, 0.06–0.6 C.c., 1–10 ♏.

Aqua Creosoti.
Dose, 3.7–30.0 C.c., 1–8 f℥, or more.

**Creosotum Carbonas* (Creosote Carbonate—Creosotal). A thick, brownish, oily liquid.
Dose, 0.06–0.6 C.c., 1–10 ♏.

**Creosotum Formaldehydum* (Creosote Formaldehyd—Cresoform). An oily liquid consisting of a combination of creosote and formaldehyd. It is employed locally as an antiseptic in the treatment of ulcers, anthrax, and promotes healing of tubercular lesions; and internally with asserted beneficial effects in the treatment of tubercular enteritis.

Dose, 0.32–2.0 C.c., 5–30 ♏.

**Creosotum Phosphas* (Creosote Phosphate—Phosphotal). An oily liquid.

Dose, 0.06–0.6 C.c., 1–10 ♏.

**Creosotum Valerianas* (Creosote Valerianate). An oily liquid.

Dose, 0.06–0.6 c.c., 1–10 ♏.

Creta Præparata (Prepared Chalk). White conical masses or a white amorphous powder.

Dose, 0.65–2.0 Gm., 10–31 gr.

Hydrargyrum cum Creta.

Dose, 0.065–0.65 Gm., 1–10 gr.

Mistura Cretæ.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Pulvis Cretæ Compositus.

Dose, 0.3–4.0 Gm., 5–62 gr.

Trochisci Cretæ.

Dose, 1 as required.

Crocus (Saffron). The stigmas of *Crocus sativus.*

Dose, 0.65–1.30 Gm., 10–20 gr., in infusion.

Tinctura Croci.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Cubeba (Cubeb). The unripe fruit of *Piper Cubeba.*

Dose (in powder), 1.9–7.8 Gm., ½–2 fʒ.

Extractum Cubebæ Fluidum.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Oleoresina Cubebæ.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Oleum Cubebæ.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Tinctura Cubebæ.
Dose, 1.8–15.0 C.c., $\frac{1}{2}$–4 fʒ.

Trochisci Cubebæ.
Dose, from 1–6 daily.

Cuprum (Copper).

Cupri Sulphas (Copper Sulphate—Blue Stone, Blue Vitriol). Large azure-blue crystals, which effloresce in air.
Dose, 0.19–0.3 Gm., 3–5 gr., as emetic.

**Cupri Arsenitis* (Copper Arsenite). A green crystalline powder.
Dose, 0.00032–0.00065 Gm., $\frac{1}{200}$–$\frac{1}{100}$ gr.

Cusso (Kousso—Brayera, Pharm. 1880). The female inflorescence of *Hagenia abyssinica.*
Dose, 15.0–31.0 Gm., 4–8 fʒ, in infusion.

Extractum Cusso Fluidum.
Dose, 7.5–15.0 C.c., 2–4 fʒ.

Cypripedium (Cypripedium—Ladies' Slipper). The rhizome and roots of *Cypripedium pubescens.*
Dose, 0.32–1.0 Gm., 5–15 gr.

Extractum Cypripedii Fluidum.
Dose, 0.3–1.8 Gm., 5–30 ♏.

***Damiana.** The leaves of *Turnera aphrodisiaca.*

**Extractum Damianæ.*
Dose, 0.13–0.65 Gm., 2–10 gr.

**Extractum Damianæ Fluidum.*
Dose, 0.6–3.7 C.c., 10–60 ♏.

Decoctum Cetrariæ (Decoction of Cetraria). In making 100 C.c. of decoction 5 Gm. of cetraria are used.
Dose, 60.0–118.0 C.c., 2–4 f℥.

Decoctum Sarsaparillæ Compositum (Compound Decoction of Sarsaparilla). 10 Gm. of sarsaparilla, 2 Gm. of sassafras, 2 Gm. of guaiacum-wood, 2 Gm. of glycyrrhiza, and 1 Gm. of mezereum are used in making 100 C.c. of decoction.

Dose, 118.0–177.0 C.c., 4–6 f℥.

Digitalis (Digitalis—Foxglove). The leaves of *Digitalis purpurea.*

Dose, 0.032–0.13 Gm., ½–2 gr.

**Digitalinum* (Digitalin). A white or yellowish powdered principle obtained from digitalis.

Dose, 0.001 Gm., $\frac{1}{64}$ gr.

Extractum Digitalis.

Dose, 0.010–0.016 Gm., $\frac{1}{6}$–$\frac{1}{4}$ gr.

Extractum Digitalis Fluidum.

Dose, 0.06–0.12 C.c., 1–2 ♏.

Infusum Digitalis.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Tinctura Digitalis.

Dose, 0.6–1.2 C.c., 10–20 ♏.

***Diphtheria Antitoxin** (Antidiphtheritic Serum). Used hypodermically.

Dose, to immunize, 500–1000 units; for treatment, 1000–5000 units.

***Dormiol.** A yellowish, oily liquid, having a camphoraceous odor; made by chemically combining amylene-hydrate with chloral. Used as a nervous sedative and hypnotic.

Dose, 0.32–1.0 Gm., 5–15 gr.

***Duboisinæ Sulphas** (Duboisine Sulphate). A brown amorphous alkaloidal salt. It is very hygroscopic.

Dose, 0.00065–0.001 Gm., $\frac{1}{100}$–$\frac{1}{64}$ gr.

Dulcamara (Dulcamara—Bittersweet). The young branches of *Solanum dulcamara.*

Dose, 1.9–3.9 Gm., ½–1 ʒ, in decoction.

Extractum Dulcamaræ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 ʒ.

Elastica (Indian Rubber—Caoutchouc). The prepared milk-juice of the various species of *Hevea.* Used in pharmaceutical manipulation.

***Elaterium** (Elaterium). The dried sediment from the juice of *Ecballium elaterium*, or "squirting cucumber."

Dose, 0.01 Gm., $\frac{1}{6}$ gr.

Elaterinum (Elaterin). A neutral principle obtained from elaterium.

Dose, 0.0021–0.0043 Gm., $\frac{1}{30}$–$\frac{1}{15}$ gr.

Trituratio Elaterini.

Dose, 0.021–0.04 Gm., $\frac{1}{3}$–$\frac{2}{3}$ gr.

Elixir Aromaticum (Aromatic Elixir). Used as a vehicle.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Elixir Phosphori (Elixir of Phosphorus). Each fluidrachm contains $\frac{1}{64}$ gr. (0.001 Gm.) of phosphorus.

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Emplastrum Ammoniaci cum Hydrargyro (Ammoniac Plaster with Mercury). Contains 72 per cent. of ammoniac, 18 per cent. of metallic mercury, 0.8 per cent. of oleate of mercury.

Emplastrum Arnicæ (Arnica Plaster). Contains 33 per cent. of extract of arnica-root.

Emplastrum Belladonnæ (Belladonna Plaster). Contains 20 per cent. of alcoholic extract of belladonna-leaves.

Emplastrum Capsici (Capsicum Plaster). Adhesive plaster coated with oleoresin of capsicum.

Emplastrum Ferri (Iron Plaster—Strengthening Plaster). Contains 9 per cent. of dried ferric hydrate.

Emplastrum Hydrargyri (Mercury Plaster). Contains 30 per cent. of metallic mercury.

Emplastrum Ichthyocollæ (Isinglass Plaster—Court Plaster).

Emplastrum Opii (Opium Plaster). Contains 6 per cent. of extract of opium.

Emplastrum Picis Burgundicæ (Burgundy Pitch Plaster). Contains 90 per cent. of Burgundy pitch.

Emplastrum Picis Cantharidatum (Cantharidal Pitch Plaster—Warming Plaster). Contains 8 per cent. of cerate of cantharides.

Emplastrum Plumbi (Lead Plaster—Diachylon Plaster). This plaster is a combination of lead oleate and palmitate.

Emplastrum Resinæ (Resin Plaster—Adhesive Plaster). Contains resin 14 per cent., lead plaster 80 per cent., and yellow wax 6 per cent.

Emplastrum Saponis (Soap Plaster). Contains soap 10 per cent. and lead plaster 90 per cent.

Emulsum Ammoniaci (Emulsion of Ammoniac—Mistura Ammoniaci, Pharm. 1880). Contains 4 Gm. of ammoniac to 100 C.c. of emulsion.

Dose, 15.0–30.0 C.c., 4–8 fʒ.

Emulsum Amygdalæ (Emulsion of Almond—Mistura Amygdalæ, Pharm. 1880; Milk of Almond). Contains 6 Gm. of sweet almond to each 100 C.c. of emulsion.

Dose, 3.7–60.00 C.c., 1 fʒ–2 f℥.

Emulsum Asafœtidæ (Emulsion of Asafetida—Mistura Asafœtidæ, Pharm. 1880; Milk of Asafœtida). Contains 4 Gm. of asafœtida to 100 C.c. of emulsion.

Dose, 15.0–30.0 C.c., 4–8 fʒ.

Emulsum Chloroformi (Emulsion of Chloroform—Mistura Chloroformi, Pharm. 1880). Contains 4 C.c. of chloroform to 100 C.c. of emulsion.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Ergota (Ergot—Ergot of Rye). Ergot obtained from rye.

Extractum Ergotæ.

Dose, 0.065–1.2 Gm., 1–20 gr.

Extractum Ergotæ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Vinum Ergotæ.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Eriodictyon (Eriodictyon—Yerba Santa). The leaves of *Eriodictyon glutinosum.*

Extractum Eriodictyi Fluidum.

Dose, 1.0–3.7 C.c., 16–60 ♏.

***Erythrolis Tetranitras** (Erythrol-tetranitrate). A white crystalline substance, soluble in alcohol, insoluble in water, explosive on percussion. Used as a powerful vasomotor depressant. Used as a vasodilator.

Dose, 0.015–0.03 Gm., ¼–½ gr.

***Ethyl Bromide.** Used by inhalation, for the purpose of producing brief anesthesia. It is a clear, colorless liquid and must not be confused with ethylene bromid, which is a deadly poison.

***Eucainæ Hydrochloratas B** (Eucaine Hydrochlorate). The hydrochloride of a synthetic alkaloid, closely related to cocain in its chemical formula and physiological action. It is used as a local anesthetic in the strength of a 2–10 per cent. aqueous solution.

***Euchinine** (Tasteless Quinine). An ethyl carbonic ester of quinine, occurring in the form of white, tasteless crystals. It is insoluble in water, but soluble in alcohol and ether.

Dose, 0.13–1.0 Gm., 2–15 gr.

Eucalyptus (Eucalyptus). The leaves of *Eucalyptus globulus*, collected from the older parts of the tree.

Dose, 0.6–3.9 Gm., 10–60 gr.

Eucalyptol (Eucalyptol). A colorless liquid.

Dose, 0.18–0.6 C.c., 3–10 ♏.

Extractum Eucalypti Fluidum.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Oleum Eucalypti.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Euonymus (Euonymus—Wahoo). The bark of the root of *Euonymus atropurpureus.*

Dose, 0.19–1.30 Gm., 3–20 gr.

**Euonyminum* (Euonymin). A yellow resinous powder obtained from euonymus.

Dose, 0.03–0.19 Gm., ½–3 gr.

Extractum Euonymi.

Dose, 0.19–0.65 Gm., 3–10 gr.

Eupatorium (Eupatorium—Thoroughwort, Boneset). The leaves and flowering tops of *Eupatorium perfoliatum.*

Dose, 1.9–3.9 Gm., ½–1 fʒ, in infusion.

Extractum Eupatorii Fluidum.

Dose, 1.8–3.75 C.c., ½–1 fʒ.

***Euphorinum** (Euphorin—Phenyl-urethane). A white crystalline powder.

Dose, 0.5–1.0 Gm., 7–15 gr.

***Euphthalmin.** A synthetic alkaloid, employed in the strength of a 2 per cent. solution as a mydriatic; soluble in water.

***Europhenum** (Europhen—Di-isobutylortho-creosol iodide). Amorphous yellow powder. Used locally as antiseptic.

***Exalgin** (Methyl-acetanilid). A colorless crystalline substance.

Dose, 0.032–0.32 Gm., ½–5 gr.

Extractum Aconiti (Extract of Aconite). An extract of a pilular consistency.

Dose, 0.01–0.016 Gm., ⅙–¼ gr.

Extractum Aconiti Fluidum (Fluid Extract of Aconite).

Dose, 0.03–0.12 C.c., ½–2 ♏.

Extractum Aloes (Extract of Aloes). A dry extract.

Dose, 0.032–0.32 Gm., ½–5 gr.

Extractum Apocyani Fluidum (Fluid Extract of Apocynum).
Dose, 0.3–1.8 C.c., 5–30 ♏.

Extractum Arnicæ Radicis (Extract of Arnica-root). An extract of a pilular consistency.
Dose, 0.19–0.32 Gm., 3–5 gr.

Extractum Arnicæ Radicis Fluidum (Fluid Extract of Arnica-root).
Dose, 0.3–0.6 C.c., 5–10 ♏.

Extractum Aromaticum Fluidum (Aromatic Fluid Extract).
Dose, 0.6–3.7 C.c., 10–60 ♏.

Extractum Asclepiadis Fluidum (Fluid Extract of Asclepias).
Dose, 1.2–3.7 C.c., 20–60 ♏.

Extractum Aspidospermatis Fluidum (Fluid Extract of Aspidosperma).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Aurantii Amari Fluidum (Fluid Extract of Bitter-orange Peel).
Dose, 1.0–1.8 C.c., 16–30 ♏.

Extractum Belladonnæ Foliorum Alcoholicum (Alcoholic Extract of Belladonna-leaves—Extractum Belladonnæ Alcoholicum, Pharm. 1880). An extract of a pilular consistency.
Dose, 0.010–0.016 Gm., ⅙–¼ gr.

Extractum Belladonnæ Radicis Fluidum (Fluid Extract of Belladonna-root—Extractum Belladonnæ Fluidum, Pharm. 1880).
Dose, 0.06–0.18 C.c., 1–2 ♏.

Extractum Buchu Fluidum (Fluid Extract of Buchu).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Calami Fluidum (Fluid Extract of Calamus).
Dose, 0.3–1.8 C.c., 5–30 ♏.

Extractum Calumbæ Fluidum (Fluid Extract of Calumba).
Dose, 1.0–3.7 C.c., 16–60 ♏.

Extractum Cannabis Indicæ (Extract of Indian Hemp). An extract of a pilular consistency.
Dose, 0.016–0.032 Gm., ¼–½ gr.

Extractum Cannabis Indicæ Fluidum (Fluid Extract of Indian Hemp).
Dose, 0.12–1.24 C.c., 2–20 ♏.

Extractum Capsici Fluidum (Fluid Extract of Capsicum).
Dose, 0.06–0.12 C.c., 1–2 ♏.

Extractum Castaneæ Fluidum (Fluid Extract of Castanea).
Dose, 3.7–7.5 C.c., 1–2 fʒ.

Extractum Chimaphilæ Fluidum (Fluid Extract of Chimaphila).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Chiratæ Fluidum (Fluid Extract of Chirata).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Cimicifugæ (Extract of Cimicifuga). An extract of a pilular consistence.
Dose, 0.065–0.32 Gm., 1–5 gr.

Extractum Cimicifugæ Fluidum (Fluid Extract of Cimicifuga).
Dose, 1.0–1.8 C.c., 16–30 ♏.

Extractum Cinchonæ (Extract of Cinchona). An extract of a pilular consistence.
Dose, 0.32–0.65 Gm., 5–10 gr.

Extractum Cinchonæ Fluidum (Fluid Extract of Cinchona).
Dose, 1.0–1.8 C.c., 16–30 ♏.

Extractum Cocæ Fluidum (Fluid Extract of Coca).
Dose, 1.8–7.5 C.c., ½–2 fʒ.

Extractum Colchici Radicis (Extract of Colchicum-root). An extract of a pilular consistence.
Dose, 0.032–0.13 Gm., ½–2 gr.

Extractum Colchici Radicis Fluidum (Fluid Extract of Colchicum-root).

Dose, 0.12–0.24 C.c., 2–4 ♏.

Extractum Colchici Seminis Fluidum (Fluid Extract of Colchicum-seed).

Dose, 0.12–0.3 C.c., 2–5 ♏.

Extractum Colocynthidis Compositum (Compound Extract of Colocynth). A dry powdered extract. Each 10 grains, 0.65 Gm., contains extract of colocynth, 1$\frac{6}{10}$ gr., 0.103 Gm.; purified aloes, 5 gr., 0.324 Gm.; cardamom, $\frac{6}{10}$ gr., 0.038 Gm.; resin of scammony, 1$\frac{4}{10}$ gr., 0.090 Gm.; and soap, 1$\frac{4}{10}$ gr., 0.090 Gm.

Dose, 0.32–1.25 Gm., 5–20 gr., as a purge.

Extractum Colocynthidis (Extract of Colocynth). A dry powdered extract.

Dose, 0.13–0.32 Gm., 2–5 gr.

Extractum Conii (Extract of Conium). Of pilular consistence.

Dose, 0.032–0.065 Gm., $\frac{1}{2}$–1 gr.

Extractum Conii Fluidum (Fluid Extract of Conium).

Dose, 0.12–0.37 C.c., 2–6 ♏.

Extractum Convallariæ Fluidum (Fluid Extract of Convallaria).

Dose, 0.25–0.5 C.c., 4–8 ♏.

Extractum Cubebæ Fluidum (Fluid Extract of Cubeb).

Dose, 0.6–3.7 C.c., 10–60 ♏.

Extractum Cusso Fluidum (Fluid Extract of Kousso—Extractum Brayeræ Fluidum, Pharm. 1880).

Dose, 7.5–15.00 C.c., 2–4 fʒ.

Extractum Cypripedii Fluidum (Fluid Extract of Cypripedium).

Dose, 0.3–1.8 C.c., 5–30 ♏.

Extractum Digitalis (Extract of Digitalis). An extract of a pilular consistence.

Dose, 0.010–0.016 Gm., $\frac{1}{6}$–$\frac{1}{4}$ gr.

Extractum Digitalis Fluidum (Fluid Extract of Digitalis).
Dose, 0.06–0.12 C.c., 1–2 ♏.

Extractum Dulcamaræ Fluidum (Fluid Extract of Dulcamara).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Ergotæ (Extract of Ergot). An extract of a pilular consistence.
Dose, 0.065–1.3 Gm., 1–20 gr.

Extractum Ergotæ Fluidum (Fluid Extract of Ergot).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Eriodictyi Fluidum (Fluid Extract of Eriodictyon).
Dose, 1.0–3.7 C.c., 16–60 ♏.

Extractum Eucalypti Fluidum (Fluid Extract of Eucalyptus).
Dose, 0.6–3.7 C.c., 10–60 ♏.

Extractum Euonymi (Extract of Euonymus). An extract of a pilular consistence.
Dose, 0.195–0.65 Gm., 3–10 gr.

Extractum Eupatorii Fluidum (Fluid Extract of Eupatorium).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Frangulæ Fluidum (Fluid Extract of Frangula).
Dose, 0.6–1.8 C.c., 10–30 ♏.

Extractum Gelsemii Fluidum (Fluid Extract of Gelsemium).
Dose, 0.12–0.6 C.c., 2–10 ♏.

Extractum Gentianæ (Extract of Gentian). An extract of a pilular consistence.
Dose, 0.065–0.65 Gm., 1–10 gr.

Extractum Gentianæ Fluidum (Fluid Extract of Gentian).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Geranii Fluidum (Fluid Extract of Geranium).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Glycyrrhizæ (Extract of Glycyrrhiza). Commercial extract of licorice in cylindrical rolls.
Dose, 0.32–6.5 Gm., 5–100 gr.

Extractum Glycyrrhizæ Fluidum (Fluid Extract of Glycyrrhiza).
Dose, 3.7–7.5 C.c., 1–2 fʒ.

Extractum Glycyrrhizæ Purum (Pure Extract of Glycyrrhiza). An extract of a pilular consistence.
Dose, 0.32–6.5 Gm., 5–100 gr.

Extractum Gossypii Radicis Fluidum (Fluid Extract of Cotton-root Bark).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Grindeliæ Fluidum (Fluid Extract of Grindelia).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Guaranæ Fluidum (Fluid Extract of Guarana).
Dose, 3.7–7.5 C.c., 1–2 fʒ.

Extractum Hæmatoxyli (Extract of Hæmatoxylon). A dry extract that can be readily reduced to a powder.
Dose, 0.52–1.9 Gm., 8–30 gr.

Extractum Hamamelidis Fluidum (Fluid Extract of Hamamelis).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Hydrastis Fluidum (Fluid Extract of Hydrastis).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Hyoscyami (Extract of Hyoscyamus). An extract of a pilular consistence.
Dose, 0.032–0.19 Gm., ½–3 gr.

Extractum Hyoscyami Fluidum (Fluid Extract of Hyoscyamus).
Dose, 0.3–1.8 C.c., 5–30 ♏.

Extractum Ipecacuanhæ Fluidum (Fluid Extract of Ipecac.).

Dose, 1.0–2.0 C.c., 16–32 ♏, as emetic; 0.06–0.12 C.c., 1–2 ♏, as expectorant.

Extractum Iridis (Extract of Iris). Of a pilular consistence.

Dose, 0.13–0.26 Gm., 2–4 gr.

Extractum Iridis Fluidum (Fluid Extract of Iris).

Dose, 0.3–0.6 C.c., 5–10 ♏.

Extractum Jalapæ (Extract of Jalap). An extract of a pilular consistence.

Dose, 0.32–0.65 Gm., 5–10 gr.

Extractum Juglandis (Extract of Juglans). An extract of a pilular consistence.

Dose, 0.32–0.65 Gm., 5–10 gr.

Extractum Krameriæ (Extract of Krameria). A dry extract.

Dose, 0.32–0.65 Gm., 5–10 gr.

Extractum Krameriæ Fluidum (Fluid Extract of Krameria).

Dose, 0.6–1.8 C.c., 10–30 ♏.

Extractum Lappæ Fluidum (Fluid Extract of Lappa).

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Leptandræ (Extract of Leptandra). An extract of a pilular consistence.

Dose, 0.065–0.52 Gm., 1–8 gr.

Extractum Leptandræ Fluidum (Fluid Extract of Leptandra).

Dose, 0.3–1.8 C.c., 5–30 ♏.

Extractum Lobeliæ Fluidum (Fluid Extract of Lobelia).

Dose, 1.0–3.7 C.c., 16 ♏–1 fʒ, as emetic; 0.06–0.3 C.c., 1–5 ♏, as expectorant.

Extractum Lupulini Fluidum (Fluid Extract of Lupulin).

Dose, 0.6–1.0 C.c., 10–16 ♏.

Extractum Matico Fluidum (Fluid Extract of Matico).

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Extractum Menispermi Fluidum (Fluid Extract of Menispermum).

Dose, 0.3–1.8 C.c., 5–30 ♏.

Extractum Mezerei Fluidum (Fluid Extract of Mezereum). Used externally.

Extractum Nucis Vomicæ (Extract of Nux Vomica). A dry powdered extract. Contains 15 per cent. of total alkaloids.

Dose, 0.01–0.032 Gm., $\frac{1}{6}$–$\frac{1}{2}$ gr.

Extractum Nucis Vomicæ Fluidum (Fluid Extract of Nux Vomica). Contains 1.5 Gm. of total alkaloids in 100 C.c. of fluid extract.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Extractum Opii (Extract of Opium). A dry powdered extract. Contains 18 per cent. of morphine.

Dose, 0.016–0.065 Gm., $\frac{1}{4}$–1 gr.

Extractum Pareiræ Fluidum (Fluid Extract of Pareira).

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Extractum Physostigmatis (Extract of Physostigma). An extract of a pilular consistence.

Dose, 0.004–0.008 Gm., $\frac{1}{16}$–$\frac{1}{8}$ gr.

Extractum Phytolaccæ Radicis Fluidum (Fluid Extract of Phytolacca-root).

Dose, 0.06–1.8 C.c., 1–30 ♏.

Extractum Pilocarpi Fluidum (Fluid Extract of Pilocarpus).

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Extractum Podophylli (Extract of Podophyllum). An extract of a pilular consistence.

Dose, 0.032–0.32 Gm., $\frac{1}{2}$–5 gr.

Extractum Podophylli Fluidum (Fluid Extract of Podophyllum).
Dose, 0.12–1.2 C.c., 2–20 ♏.

Extractum Pruni Virginianæ Fluidum (Fluid Extract of Wild Cherry).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Quassiæ (Extract of Quassia). An extract of a pilular consistence.
Dose, .065–.195 Gm., 1–3 gr.

Extractum Quassiæ Fluidum (Fluid Extract of Quassia).
Dose, 0.3–0.6 C.c., 5–10 ♏.

Extractum Rhamni Purshianæ Fluidum (Fluid Extract of Rhamnus Purshiana).
Dose, 1.0–1.8 C.c., 16–30 ♏.

Extractum Rhei (Extract of Rhubarb). An extract of a pilular consistence.
Dose, 0.32–0.65 Gm., 5–10 gr.

Extractum Rhei Fluidum (Fluid Extract of Rhubarb).
Dose, 0.6–1.8 C.c., 10–30 ♏.

Extractum Rhois Glabræ Fluidum (Fluid Extract of Rhus Glabra).
Dose, 0.6–1.8 C.c., 10–30 ♏.

Extractum Rosæ Fluidum (Fluid Extract of Rose).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Rubi Fluidum (Fluid Extract of Rubus).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Rumicis Fluidum (Fluid Extract of Rumex).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Sabinæ Fluidum (Fluid Extract of Savine).
Dose, 0.3–1.0 C.c., 5–16 ♏.

Extractum Sanguinariæ Fluidum (Fluid Extract of Sanguinaria).
Dose, 0.06–0.3 C.c., 1–5 ♏.

Extractum Sarsaparillæ Fluidum (Fluid Extract of Sarsaparilla).

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Sarsaparillæ Fluidum Compositum (Compound Fluid Extract of Sarsaparilla). Made from 75 per cent. of sarsaparilla, 12 per cent. of glycyrrhiza, 10 per cent. of sassafras, and 3 per cent. of mezereum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Scillæ Fluidum (Fluid Extract of Squill).

Dose, 0.06–0.3 C.c., 1–5 ♏.

Extractum Scoparii Fluidum (Fluid Extract of Scoparius).

Dose, 0.3–1.2 C.c., 5–20 ♏.

Extractum Scutellariæ Fluidum (Fluid Extract of Scutellaria).

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Senegæ Fluidum (Fluid Extract of Senega).

Dose, 0.3–1.2 C.c., 5–20 ♏.

Extractum Sennæ Fluidum (Fluid Extract of Senna).

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Extractum Serpentariæ Fluidum (Fluid Extract of Serpentaria).

Dose, 0.6–1.8 C.c., 10–30 ♏.

Extractum Spigeliæ Fluidum (Fluid Extract of Spigelia).

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Extractum Stillingiæ Fluidum (Fluid Extract of Stillingia).

Dose, 0.6–3.7 C.c., 10–60 ♏.

Extractum Stramonii Seminis (Extract of Stramonium-seed—Extractum Stramonii, Pharm. 1880). An extract of a pilular consistence.

Dose, 0.010–0.032 Gm., ⅙–½ gr.

Extractum Stramonii Seminis Fluidum (Fluid Extract of Stramonium-seed—Extractum Stramonii Fluidum, Pharm. 1880).

Dose, 0.06–0.12 C.c., 1–2 ♏.

Extractum Taraxaci (Extract of Taraxacum). An extract of a pilular consistence.

Dose, 0.32–1.9 Gm., 5–30 gr.

Extractum Taraxaci Fluidum (Fluid Extract of Taraxacum).

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Extractum Tritici Fluidum (Fluid Extract of Triticum).

Dose, 7.5–15.0 C.c., 2–4 fʒ.

Extractum Uvæ Ursi (Extract of Uva Ursi). An extract of a pilular consistence.

Dose, 0.065–0.32 Gm., 1–5 gr.

Extractum Uvæ Ursi Fluidum (Fluid Extract of Uva Ursi).

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Extractum Valerianæ Fluidum (Fluid Extract of Valerian).

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Veratri Viridis Fluidum (Fluid Extract of Veratrum Viride).

Dose, 0.06–0.18 C.c., 1–3 ♏.

Extractum Viburni Opuli Fluidum (Fluid Extract of Viburnum Opulus).

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Extractum Viburni Prunifolii Fluidum (Fluid Extract of Viburnum Prunifolium).

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Extractum Xanthoxyli Fluidum (Fluid Extract of Xanthoxylum).

Dose, 0.6–1.8 C.c., 10–30 ♏.

Extractum Zingiberis Fluidum (Fluid Extract of Ginger).

Dose, 0.6–1.8 C.c., 10–30 ♏.

Fel Bovis (Oxgall—Fel Tauri). The fresh bile of *Bos Taurus*.

Fel Bovis Purificatum (Purified Oxgall).

Dose, 0.32–0.65 Gm., 5–10 gr.

Ferrum (Iron).

Emplastrum Ferri. Used externally.

**Ferri Albuminas* (Iron Albuminate). Golden-yellow transparent scales.

Dose, 0.13–0.6 Gm., 2–10 gr.

**Ferri Arsenas* (Iron Arsenate). A bluish-green or green amorphous powder.

Dose, 0.003–0.006 Gm., $\frac{1}{20}$–$\frac{1}{10}$ gr.

Ferri Carbonas Saccharatus (Saccharated Ferrous Carbonate). A greenish-gray or greenish-brown powder, becoming oxidized upon exposure to air.

Dose, 0.19–0.65 Gm., 3–10 gr.

Ferri Chloridum (Ferric Chloride). Orange-yellow, crystalline, deliquescent lumps. Rarely used internally, but mainly externally as a hæmostatic.

Dose, 0.065–0.19 Gm., 1–3 gr.

Ferri Citras (Ferric Citrate). Thin, transparent, garnet-red scales.

Dose, 0.13–0.32 Gm., 2–5 gr.

Ferri et Ammonii Citras (Iron and Ammonium Citrate). Thin, transparent, deliquescent, garnet-red scales.

Dose, 0.13–0.32 Gm., 2–5 gr.

Ferri et Ammonii Sulphas (Iron and Ammonium Sulphate—Ammonio-ferric Alum). Pale amethyst or violet-colored crystals.

Dose, 0.13–0.32 Gm., 2–5 gr.

Ferri et Ammonii Tartras (Iron and Ammonium Tartrate). Thin, transparent, garnet-red or reddish-brown scales. Hygroscopic in moist atmosphere.

Dose, 0.32–0.65 Gm., 5–10 gr.

Ferri et Potassii Tartras (Iron and Potassium Tartrate). Thin, transparent, garnet-red or reddish-brown scales.

Dose, 0.32–0.65 Gm., 5–10 gr.

Ferri et Quininæ Citras (Iron and Quinine Citrate). Transparent, reddish-brown or yellowish-green-brown scales. Deliquescent in moist atmosphere. Contains about 1 gr. of quinine to 5 gr. of the scales.

Dose, 0.32–0.65 Gm., 5–10 gr.

Ferri et Quininæ Citras Solubilis (Soluble Iron and Quinine Citrate). Thin, transparent, greenish or golden-yellow scales. Deliquescent in moist atmosphere. Contains 0.065 Gm., 1 gr., of quinine in about 0.3 Gm., 5 gr., of the scales.

Dose, 0.32–0.65 Gm., 5–10 gr.

Ferri et Strychninæ Citras (Iron and Strychnine Citrate). Thin, transparent, garnet-red or yellowish-brown scales. Deliquescent in moist atmosphere. Contains about 0.0006 Gm., $\frac{1}{100}$ gr., of strychnine in 0.065 Gm., 1 gr., of the scales.

Dose, 0.065–0.19 Gm., 1–3 gr.

Ferri Hypophosphis (Ferric Hypophosphite). A white or grayish powder.

Dose, 0.32–0.65 Gm., 5–10 gr.

Ferri Iodidum Saccharatum (Saccharated Ferrous Iodide). A yellowish or grayish powder. Very hygroscopic.

Dose, 0.13–0.32 Gm., 2–5 gr.

Ferri Lactas (Ferrous Lactate). Pale greenish-white crusts or a yellowish, greenish-white powder.

Dose, 0.065–0.32 Gm., 1–5 gr.

Ferri Oxidum Hydratum (Ferric Hydrate—Hydrated Oxide of Iron). A brownish-red magma. As antidote to arsenic, about 15.0 Gm., 4 ℥, in water every few minutes until several ounces have been swallowed.

Ferri Oxidum Hydratum cum Magnesia (Ferric Hydrate with Magnesia). A brownish-red mixture. As antidote to arsenic, 62.0–122.0 C.c., 2–4 f℥, of the mixture should be swallowed every few minutes.

Ferri Phosphas Solubilis (Soluble Ferric Phosphate). Thin, transparent bright-green scales, becoming dark upon exposure to light.

Dose, 0.13–0.32 Gm., 2–5 gr.

Ferri Pyrophosphas Solubilis (Soluble Ferric Pyrophosphate). Thin, transparent green scales, becoming dark upon exposure to light.

Dose, 0.13–0.32 Gm., 2–5 gr.

**Ferri Salicylas* (Ferric Salicylate). A light crystalline powder.

Dose, 0.32–0.62 Gm., 5–10 gr.

**Ferri Subsulphas* (Ferric Subsulphate—Monsel's Salt). A reddish-brown powder.

Dose, 0.13–0.19 Gm., 2–3 gr.

Ferri Sulphas (Ferrous Sulphate). Transparent, bluish-green crystals. Efflorescent upon exposure to air.

Dose, 0.065–0.32 Gm., 1–5 gr.

Ferri Sulphas Exsiccatus (Dried Ferrous Sulphate). A grayish-white powder.

Dose, 0.032–0.13 Gm., ½–2 gr.

Ferri Sulphas Granulatus (Granulated Ferrous Sulphate—Ferri Sulphas Præcipitatus, Pharm. 1880). A bluish-green crystalline powder.

Dose, 0.065-0.32 Gm., 1–5 gr.

Ferri Valerianas (Ferric Valerianate). A brick-red amorphous powder.

Dose, 0.065–0.19 Gm., 1–3 gr.

**Ferrum Dialysatum* (Dialyzed Iron). Employed as a clear reddish-brown liquid.

Dose, 0.6–2.0 C.c., 10–32 ♏, or 30.0–60.0 C.c., 2–4 tablespoonfuls, frequently repeated, as antidote to arsenic.

Ferrum Reductum (Reduced Iron—Iron by Hydrogen, Quevenne's Iron). A fine grayish-black powder.

Dose, 0.032–0.32 Gm., ½–5 gr.

Liquor Ferri Acetatis.
Dose, 0.3–1.0 C.c., 5–16 ♏.
Liquor Ferri Chloridi.
Dose, 0.3–0.6 C.c., 5–10 ♏.
Liquor Ferri Citratis.
Dose, 0.3–1.0 C.c., 5–16 ♏.
Liquor Ferri et Ammonii Acetatis.
Dose, 7.5–30.0 C.c., 2–8 fʒ.
Liquor Ferri Nitratis.
Dose, 0.06–0.3 C.c., 1–5 ♏.
Liquor Ferri Subsulphatis.
Dose, 0.3–0.6 C.c., 5–10 ♏.
Liquor Ferri Tersulphatis. Used for making arsenic antidote.
Massa Ferri Carbonatis.
Dose, 0.19–0.65 Gm., 3–10 gr.
Mistura Ferri Composita.
Dose, 3.7–15.0 C.c., 1–4 fʒ.
Pilulæ Aloes et Ferri.
Dose, 1–3.
Pilulæ Ferri Carbonatis.
Dose, 1–3.
Pilulæ Ferri Iodidi.
Dose, 1–3.
Potassii Ferrocyanidum.
Dose, 0.6–1.0 Gm., 10–15 gr.; more freely as antidote to copper.
Syrupus Ferri Iodidi.
Dose, 0.3–2.0 C.c., 5–32 ♏.
Syrupus Ferri, Quininæ et Strychninæ Phosphatum.
Dose, 3.7–7.5 C.c., 1–2 fʒ.
Syrupus Hypophosphitum cum Ferro.
Dose, 3.7–15.0 C.c., 1–4 fʒ.

Tinctura Ferri Chloridi.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Trochisci Ferri.

Dose, 1.

Vinum Ferri Amarum.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Vinum Ferri Citratis.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Ficus (Fig). The fleshy receptacle of *Ficus Carica.* It enters into the composition of the confection of senna.

Dose, 3.9–15.0 Gm., 1–4 fʒ, or more.

Fœniculum (Fennel). The fruit of *Fœniculum capillaceum.*

Aqua Fœniculi.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Oleum Fœniculi.

Dose, 0.06–0.3 C.c., 1–5 ♏.

***Formaldehydum** (Formal—Formalin). A clear, colorless liquid, with a strong pungent odor, and highly irritating to mucous membranes and abrasions. Used as a disinfectant and antiseptic.

Dose, 0.03–0.06 C.c., ½–1 ♏.

Frangula (Frangula—Buckthorn). The bark of *Rhamnus frangula,* collected at least one year before being used.

Extractum Frangulæ Fluidum.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Galla (Nutgall). The excrescence of *Quercus lusitanica.*

Dose, 0.3–1.0 Gm., 5–15 gr.

Tinctura Gallæ.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Unguentum Gallæ. Externally.

Gelsemium (Gelsemium—Yellow Jasmine). The rhizome and roots of *Gelsemium sempervirens.*

**Gelsemina* (Gelsemine). A white amorphous powder obtained from gelsemium.

Dose, 0.001–0.002 Gm., $\frac{1}{64}$–$\frac{1}{32}$ gr.

Extractum Gelsemii Fluidum.

Dose, 0.12–0.6 C.c., 2–10 ♏.

Tinctura Gelsemii.

Dose, 0.6–1.2 C.c., 10–20 ♏.

There is an unofficial tincture of gelsemium which is much stronger and of which the dose is smaller.

Gentiana (Gentian). The root of *Gentiana lutea.*

Extractum Gentianæ.

Dose, 0.065–0.65 Gm., 1–10 gr.

Extractum Gentianæ Fluidum.

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

**Infusum Gentianæ Compositum.*

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Tinctura Gentianæ Composita.

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Geranium (Geranium—Crane's Bill). The rhizome of *Geranium maculatum.*

Extractum Geranii Fluidum.

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

***Glonoinum** (Nitro-glycerin).

Dose, 0.00065–0.0013 Gm., $\frac{1}{100}$–$\frac{1}{50}$ gr.

Spiritus Glonoini.

Dose, 0.06–0.12 C.c.; 1–2 ♏.

Glycerinum (Glycerin). A liquid obtained by the decomposition of fats or fixed oils, and containing not less than 95 per cent. of absolute glycerin.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Glyceritum Acidi Carbolici (Glycerite of Carbolic Acid). A syrupy liquid containing 20 per cent. of carbolic acid.

Dose, 0.13–0.6 C.c., 2–10 ♏.

Glyceritum Acidi Tannici (Glycerite of Tannic Acid). A syrupy liquid containing 20 per cent. of tannic acid.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Glyceritum Amyli (Glycerite of Starch). A soft gelatinous mass containing 10 per cent. of starch. Used as an excipient and also locally.

Glyceritum Boroglycerini (Glycerite of Boroglycerin). A thick syrupy liquid containing 50 per cent. of boroglycerin. Used locally.

Glyceritum Hydrastis (Glycerite of Hydrastis). A syrupy liquid in which each C.c. represents the medicinal value of 1 Gm. of hydrastis.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Glyceritum Vitelli (Glycerite of Yolk of Egg). A syrupy liquid containing 45 per cent. of fresh yolk of egg.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Suppositoria Glycerini. Each suppository contains 6 Gm., 92 gr., of glycerin.

Dose, 1 as required.

Glycyrrhiza (Glycyrrhiza—Liquorice-root). The root of *Glycyrrhiza glabra.*

Extractum Glycyrrhizæ.

Dose, 0.32–6.5 Gm., 5–100 gr.

Extractum Glycyrrhizæ Fluidum.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Extractum Glycyrrhizæ Purum.

Dose, 0.32–6.5 Gm., 5–100 gr.

Glycyrrhizinum Ammoniatum.

Dose, 0.32–1.0 Gm., 5–15 gr.

Mistura Glycyrrhizæ Composita (Brown Mixture).

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Pulvis Glycyrrhizæ Compositus.

Dose, 2.0–8.0 Gm., 31–123 gr.

Trochisci Glycyrrhizæ et Opii.

Dose, 1 as required.

Gossypii Radicis Cortex (Cotton-root Bark). A bark, principally from the root of *Gossypium herbaceum.*

Extractum Gossypii Radicis Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Gossypium Purificatum (Purified Cotton—Gossypium, Pharm. 1880; Absorbent Cotton). The hairs of the seed of *Gossypium,* free from impurities and fatty matter.

Pyroxylinum. Used for making collodion.

Oleum Gossypii Seminis (made from cotton-seed). Used for making liniments.

Granatum (Pomegranate). The bark of the stem and root of *Punica Granatum.*

Dose, 15.0–31.0 Gm., ½–1 ℥, in decoction.

Pelletierinæ Tannas.

Dose, 0.19–0.32 Gm., 3–5 gr.

Grindelia (Grindelia). The leaves and flowering tops of *Grindelia robusta* and *G. squarrosa.*

Extractum Grindeliæ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Guaiaci Lignum (Guaiacum-wood). The heart-wood of *Guaiacum officinale.*

Dose, 3.9–7.8 Gm., 1–2 ʒ, in decoction.

Guaiaci Resina (Guaiac).

Dose, 0.3–1.9 Gm., 5–30 gr.

Tinctura Guaiaci.

Dose, 1.8–3,7 C.c., ½–1 fʒ.

Tinctura Guaiaci Ammoniata.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

**Trochisci Guaiaci Compositum.*

Dose, 1 every two or three hours.

*__Guaiacolum__ (Guaiacol). A colorless liquid obtained from beechwood-tar creosote.

Dose, 0.3–0.6 C.c., 5–10 ♏.

*_Guaiacoli Benzoas_ (Benzosol, Benzoyl-guaiacol). A colorless, tasteless, odorless crystalline powder.

Dose, 0.32–0.65 Gm., 5–10 gr.

*_Guaiacoli Carbonas_ (Duotal). A white, tasteless, odorless crystalline powder.

Dose, 0.32–0.65 Gm., 5–10 gr.

*_Guaiacoli-diethyli-glycocoli Hydrochloras_ (Guaiasanol). It occurs in white crystalline prisms, is very soluble in water, having a slight odor of guaiacol and a salty, bitter taste.

Dose, 0.32–2.0 Gm., 5–30 gr.

*_Guaiacoli Phosphatum_ (Guaiaco-phosphal). A white crystalline substance with a pungent taste, soluble in alcohol and sparingly soluble in water. It is said to contain 90 per cent. of guaiacol.

Dose, 0.32–1.0 Gm., 5–15 gr.

*_Guaiacoli Salicylas._ A white, tasteless, odorless crystalline powder.

Dose, 0.23–0.65 Gm., 5–10 gr.

*_Guaiacoli Valerianas_ (Guaiacol Valerianate—Geosote). An oily liquid with a smoky odor, tastes first sweetish, becoming bitter.

Dose, 0.12–0.60 C.c., 2–10 ♏.

*_Guaiacol Potassio-sulphate_ (Sulpho-guaiacolate of Potassium, Thiocol). A fine, white, odorless powder, freely soluble in water. It is said to contain 60 per cent. of guaiacol.

Dose, 0.32–1.3 Gm., 5–20 gr.

*_Guaiamar._ A white, crystalline substance formed by the action of anhydrous glycerin upon guaiacol. It is soluble in 20 parts of water, and freely soluble in alcohol.

Dose, 0.32–1.0 Gm., 5–15 gr.

Guarana (Guarana). A dried paste, chiefly consisting of the crushed or pounded seeds of *Paullinia cupana.*

Dose, 3.9–7.8 Gm., 1–2 ʒ.

Extractum Guaranæ Fluidum.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Hæmatoxylon (Hæmatoxylon—Logwood). The heart-wood of *Hæmatoxylon campechianum.*

Extractum Hæmatoxyli.

Dose, 3.9–1.2 C.c., 5–30 gr.

**Extractum Hæmatoxyli Fluidum.*

Dose, 1.8–15.0 C.c., 1–4 fʒ.

***Haffkine's Prophylactic Vaccine Virus** (Anti-cholera Vaccine). Used hypodermically.

Dose, 2.0–3.0 C.c., 30–45 ♏.

Hamamelis (Hamamelis—Witch-hazel). The leaves of *Hamamelis virginiana.*

Extractum Hamamelidis Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Hedeoma (Hedeoma—Pennyroyal). The leaves and tops of *Hedeoma pulegioides.*

Dose, 1.9–15.0 Gm., ½–4 ʒ, in infusion.

Oleum Hedeomæ.

Dose, 0.06–0.3 C.c., 1–5 ♏.

***Holocaina Hydrochloras** (Holocain). A white crystalline substance, soluble in water (1 : 40), used in the strength of 1 per cent. aqueous solution as a local anesthetic in ophthalmic practice.

***Homotropinæ Hydrobromas** (Homatropine Hydrobromate). Applied as a mydriatic in strength of about 0.26 Gm., 4 gr., in 30.0 C.c., f℥j, of distilled water.

Humulus (Hops). The strobiles of *Humulus Lupulus*.

Tinctura Humuli.

Dose, 15.0–30.0 C.c., ½–3 f℥.

Lupulinum (Lupulin).

Dose, 0.65–1.0 Gm., 10–15 gr.

Extractum Lupulini Fluidum.

Dose, 0.6–1.0 C.c., 10–16 ♏.

Oleoresina Lupulinum.

Dose, 0.12–0.3 C.c., 2–5 ♏.

Hydrargyrum (Mercury—Quicksilver). A shining, silver-white metal, liquid at the ordinary temperature.

Emplastrum Ammoniaci cum Hydrargyro. Contains 18 per cent. of mercury. Used externally.

Emplastrum Hydrargyri. Contains 30 per cent. of mercury. Used externally.

Hydrargyrum cum Creta. Contains 38 per cent. of mercury.

Dose, 0.065–0.65 Gm., 1–10 gr.

Massa Hydrargyri. Contains 33 per cent. of mercury.

Dose, 0.19–0.65 Gm., 3–10 gr.

Unguentum Hydrargyri. Contains 50 per cent. of mercury. Used externally.

Hydrargyri Chloridum Corrosivum (Corrosive Mercuric Chloride—Corrosive Sublimate, Bichloride of Mercury). Colorless rhombic crystals, or more frequently heavy white crystalline masses.

Dose, 0.002–0.004 Gm., $\frac{1}{32}$–$\frac{1}{16}$ gr.

Hydrargyri Chloridum Mite (Mild Mercurous Chloride—Calomel). A heavy white powder, becoming yellowish on being triturated under strong pressure.

Dose, 0.0032–0.65 Gm., $\frac{1}{20}$–10 gr.

Hydrargyri Cyanidum (Mercuric Cyanide). Colorless or white crystals, becoming dark upon exposure to light.

Dose, 0.0022–0.0032 Gm., $\frac{1}{30}$–$\frac{1}{20}$ gr.

Hydrargyri Iodidum Flavum (Yellow Mercurous Iodide—Green Iodide of Mercury—Protiodide of Mercury—Hydrargyri Iodidi Viride, Pharm. 1880). A heavy bright-yellow powder, becoming dark upon exposure to light.

Dose, 0.01–0.065 Gm., $\frac{1}{6}$–1 gr.

Hydrargyri Iodidi Rubrum (Red Mercuric Iodide—Biniodide of Mercury). A heavy scarlet-red powder.

Dose, 0.0022–0.0032 Gm., $\frac{1}{30}$–$\frac{1}{20}$ gr.

Hydrargyri Oxidum Flavum (Yellow Mercuric Oxide). A heavy light-orange-yellow powder.

Hydrargyri Oxidum Rubrum (Red Mercuric Oxide—Red Precipitate). A heavy orange-red, crystalline powder.

Dose, 0.0013–0.006 Gm., $\frac{1}{50}$–$\frac{1}{10}$ gr.

**Hydrargyri Salicylas* (Mercuric Salicylate). A white amorphous powder.

Dose, 0.001–0.008 Gm., $\frac{1}{60}$–$\frac{1}{8}$ gr.

Hydrargyri Subsulphas Flavus (Yellow Mercuric Subsulphate—Turpeth Mineral). A heavy lemon-yellow powder.

Dose, as emetic, 0.19–0.32 Gm., 3–5 gr.

Hydrargyrum Ammoniatum (Ammoniated Mercury—White Precipitate). A white amorphous powder. Only used externally.

Liquor Arseni et Hydrargyri Iodidi.

Dose. 0.06–0.18 C.c., 1–3 ♏.

Liquor Hydrargyri Nitratis. A powerful caustic.

**Lotio Hydrargyri Flava* (Yellow Wash). Used locally.

**Lotio Hydrargyri Nigra* (Black Wash). Used locally.

**Mercurol* (Mercury Nucleid). Used as an antiseptic.

**Mercuriol.* An amalgam of aluminium and magnesium. Used locally.

Oleatum Hydrargyri. Used externally.

Unguentum Hydrargyri Ammoniati. Used locally.

Unguentum Hydrargyri Nitratis (Ointment of Mercuric Nitrate—Citrine Ointment). Used locally.

Unguentum Hydrargyri Oxidi Flavi. Used locally.

Unguentum Hydrargyri Oxidi Rubri. Used locally.

Hydrastis (Hydrastis—Golden Seal). The rhizome and roots of *Hydrastis canadensis.*

Hydrastininæ Hydrochloras. The hydrochlorate of an alkaloid obtained from hydrastis. Deliquescent in a damp atmosphere.

Dose, 0.016–0.065 Gm., $\frac{1}{4}$–1 gr.

Extractum Hydrastis Fluidum.

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Glyceritum Hydrastis.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Hydrastis.

Dose, 1.8–7.5 C.c., $\frac{1}{2}$–2 fʒ.

***Hydronaphtol.** Silvery-white or grayish crystalline scales derived from beta-naphtol.

Dose, 0.13–0.65 Gm., 2–10 gr.

Hyoscyamus (Hyoscyamus—Henbane). The leaves and tops of *Hyoscyamus niger*, collected from plants of the second year's growth.

Extractum Hyoscyami.

Dose, 0.032–0.19 Gm., $\frac{1}{2}$–3 gr.

Extractum Hyoscyami Fluidum.

Dose, 0.3–1.8 C.c., 5–30 ♏.

Hyoscinæ Hydrobromas (Hyoscine Hydrobromate). The hydrobromate of an alkaloid obtained from hyoscyamus. Transparent, colorless crystals.

Dose, 0.00054–0.0008 Gm., $\frac{1}{120}$–$\frac{1}{80}$ gr.

Hyoscyaminæ Hydrobromas (Hyoscyamine Hydrobromate). The hydrobromate of an alkaloid obtained from hyoscyamus. A yellowish-white amorphous mass or prismatic crystals.

Dose, 0.0006–0.0013 Gm., $\frac{1}{100}$–$\frac{1}{50}$ gr.

Hyoscyaminæ Sulphas (Hyoscyamine Sulphate). The sulphate of an alkaloid obtained from hyoscyamus. White indistinct crystals or a white powder. Deliquescent in a moist atmosphere.

Dose, 0.0006–0.0013 Gm., $\frac{1}{100}$–$\frac{1}{50}$ gr.

Tinctura Hyoscyami.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

***Hypnal** (Monochloral-antipyrine). Transparent crystals.

Dose, 0.32–1.3 Gm., 5–20 gr.

***Hypnone** (Phenyl-methyl-ketone—Acetophenone). A colorless liquid.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Ichthyocolla (Isinglass). The swimming bladder of *Acipenser Huso* and other species of *Acipenser.*

Emplastrum Ichthyocollæ. Used locally.

***Ichthyol.** A dark-brown, nearly black oily liquid or semi-solid, derived from a crude oil obtained by destructive distillation of a bituminous rock which is filled with the petrified remains of prehistoric fish. Used mostly in ointments of 25 to 50 per cent.

Dose, 0.065–0.65 Gm., 1–10 gr.

Ammonium Ichthyosulphate is liquid ichthyol.

Potassium Ichthyosulphate is soft, semi-solid ichthyol.

**Ichthalbin* (Ichthyol Albuminate). It is a grayish-brown, odorless, and almost tasteless powder.

Dose, 0.32–2.0 Gm., 5–30 gr.

**Ichthargon.* An ichthyol silver compound, It is a dark brown powder, soluble in water. Used as an astringent and an antiseptic in the treatment of gonorrhea in an aqueous solution in the strength of 0.02–0.2 per cent.

***Ignatia** (St. Ignatius' Bean). The seed of *Strychnos ignatii.*

* *Tinctura Ignatiæ.*

Dose, 0.12–0.6 C.c., 2–10 ♏.

Illicium (Illicium—Star Anise). The fruit of *Illicium verum.* This is one of the sources of oil of anise.

Infusum Cinchonæ (Infusion of Cinchona). 6 Gm. of cinchona, 1 C.c. of aromatic sulphuric acid, to 100 C.c. of infusion.

Dose, 15.0–60.0 C.c., 4–16 f℥.

Infusum Digitalis (Infusion of Digitalis). 1.5 Gm. of digitalis, 10 C.c. of alcohol, 15 C.c. of cinnamon-water, to 100 C.c. of infusion.

Dose, 3.7–15.0 C.c., 1–4 f℥.

Infusum Pruni Virginianæ (Infusion of Wild Cherry). 4 Gm. of wild cherry to 100 C.c. of infusion.

Dose, 5.0–30.0 C.c., 4–8 f℥.

Infusum Sennæ Compositum (Compound Infusion of Senna—Black Draught). Fennel, 2 Gm.; manna, 12 Gm.; magnesium sulphate, 12 Gm.; and senna, 6 Gm., to 100 C.c. of infusion.

Dose, 60.–240. C.c., 2–8 f℥.

Inula (Inula—Elecampane). The root of *Inula Helenium.*

Dose, 1.3–3.9 Gm., 20–60 gr. Best given in infusion or decoction.

Iodoformum (Iodoform). Small lemon-colored crystals.

Dose, 0.065–0.32 Gm., 1–5 gr. Used mostly externally as an antiseptic.

Unguentum Iodoformi. Used externally.

***Iodol** (Tetraiodopyrrol). A pale-yellow powder. Used mostly as antiseptic dusting-powder.

Dose, 0.32–1.3 Gm., 5–20 gr.

Iodum (Iodine). A non-metallic element found in sea-weed and elsewhere.

Preparations containing Free Iodine.

Liquor Iodi Compositus.
Dose, 0.32–1.0 C.c., 5–16 ♏.
Tinctura Iodi.
Dose, 0.18–0.3 C.c., 3–5 ♏. Also used locally.
Unguentum Iodi. Used externally.

**Æthyl Iodidum.*
Dose, 0.6–1.0 C.c., 10–16 ♏, by inhalation.
Ammonii Iodidum.
Dose, 0.13–0.32 Gm., 2–5 gr., or more.
**Aristol.* Used locally.
Argenti Iodidum.
Dose, 0.016–0.13 Gm., $\frac{1}{4}$–2 gr.
Arseni Iodidum.
Dose, 0.0032–0.0065 Gm., $\frac{1}{20}$–$\frac{1}{10}$ gr.
Ferri Iodidum Saccharatum.
Dose, 0.13–0.32 Gm., 2–5 gr.
Hydrargyri Iodidum Flavum.
Dose, 0.01–0.065 Gm., $\frac{1}{6}$–1 gr.
Hydrargyri Iodidum Rubrum.
Dose, 0.0022–0.0032 Gm., $\frac{1}{30}$–$\frac{1}{20}$ gr.
Iodoformum.
Dose, 0.065–0.32 Gm., 1–5 gr.
**Iodol.*
Dose, 0.32–1.3 Gm., 5–20 gr.
Liquor Arseni et Hydrargyri Iodidi.
Dose, 0.06-0.18 C.c., 1–3 ♏.
Pilulæ Ferri Iodidi.
Dose, 1 or 3 pills.
Plumbi Iodidum.
Dose, 0.032–0.13 Gm., $\frac{1}{2}$–2 gr.
Potassii Iodidum.
Dose, 0.32–2.0 Gm., 5–31 gr., or more.
Sodii Iodidum.
Dose, 0.32–2.0 Gm., 5–31 gr., or more.

Strontii Iodidum.

Dose, 0.32–2.0 Gm., 5–31 gr., or more.

Sulphuris Iodidum.

Dose, 0.016–0.065 Gm., ¼–1 gr.

Syrupus Acidi Hydriodici.

Dose, 1.8–15.0 C.c., ½–4 fʒ.

Syrupus Ferri Iodidi.

Dose, 0.3–2.0 C.c., 5–32 ♏.

Zinci Iodidum.

Dose, 0.032–0.13 Gm., ½–2 gr.

Ipecacuanha (Ipecac). The root of *Cephaëlis Ipecacuanha.*

Dose, 0.032–2.0 Gm., ½–31 gr.

Extractum Ipecacuanhæ Fluidum.

Dose, 0.06–0.12 C.c., 1–2 ♏, as expectorant; 1.0–2.0 C.c., 16–32 ♏, as emetic.

Pulvis Ipecacuanhæ et Opii.

Dose, 0.065–1.0 Gm., 1–15 gr.

Syrupus Ipecacuanhæ.

Dose, 0.6–3.7 C.c., 10 ♏–1 fʒ, as expectorant; 7.5–15.00 C.c., 2–4 fʒ, as emetic.

Tinctura Ipecacuanhæ et Opii.

Dose, 0.3–1.0 Gm., 5–16 ♏.

Trochisci Morphinæ et Ipecacuanhæ.

Dose, 1 as required.

Trochisci Ipecacuanhæ.

Dose, 1 as required.

Vinum Ipecacuanhæ.

Dose, 0.6–1.8 C.c., 10–30 ♏, as expectorant.

Iris (Iris—Blue Flag). Rhizome and roots of *Iris versicolor.*

Dose, 0.32–0.65 Gm., 5–10 gr.

Extractum Iridis.

Dose, 0.13–0.26 Gm., 2–4 gr.

Extractum Iridis Fluidum.

Dose, 0.3–0.6 C.c., 5–10 ♏.

***Itrol** (Silver Citrate). A light, odorless powder, sparingly soluble in water (1 : 4000). Used locally as an astringent and as an antiseptic. In aqueous solutions it is used as an injection in the treatment of gonorrhea in the strength of from 1 : 10,000, gradually increased to 1 : 4000.

Jalapa (Jalap). The tuberous root of *Ipomœa Jalapa.*

Dose, in powder, 1.0–2.0 Gm., 15–30 gr.

Extractum Jalapæ.

Dose, 0.32–0.65 Gm., 5–10 gr.

Pulvis Jalapæ Compositus.

Dose, 1.0–2.59 Gm., 15–40 gr.

Resinæ Jalapæ.

Dose, 0.13–0.26 Gm., 2–4 gr.

Juglans (Juglans—Butternut). The bark of the root of *Juglans cinerea,* collected in autumn.

Extractum Juglandis.

Dose, 0.32–0.65 Gm., 5–10 gr.

***Juniperis** (Juniper-berries).

Dose, 15.5–31.1 Gm., ½–1 ℥, in infusion.

Oleum Juniperi.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Spiritus Juniperi.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Spiritus Juniperi Compositus.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Kamala (Kamala—Rottlera, Pharm. 1870). The glands and hair from the capsules of *Mallotus philippinensis.*

Dose, 3.9–7.8 Gm., 1–2 ʒ.

Kino (Kino). The inspissated juice of *Pterocarpus Marsupium.*

Dose, 0.32–0.65 Gm., 5–10 gr., in powder.

Tinctura Kino.

Dose, 3.7–7.5 Gm., 1–2 fʒ.

Krameria (Krameria—Rhatany). The root of *Krameria triandra* and of *Krameria Ixina*.

Extractum Kramcriæ.

Dose, 0.32–0.65 Gm., 5–10 gr.

Extractum Kramcriæ Fluidum.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Syrupus Kramcriæ.

Dose, 1.8–7.5 C.c., 30 ♏–2 fʒ.

Tinctura Krameriæ.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Trochisci Kramcriæ.

Dose, 1 as required.

Lactucarium (Lactucarium—Lettuce Opium). The concrete milk-juice of *Lactuca virosa.*

Dose, 1.0–1.9 Gm., 15–30 gr.

Syrupus Lactucarii.

Dose, 3.7–11.2 C.c., 1–3 fʒ.

Tinctura Lactucarii.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Lappa (Lappa—Burdock). The root of *Arctium Lappa* and some other species of *Arctium.*

Dose, 1.9–3.9 Gm., 30–60 gr., in infusion.

Extractum Lappæ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

***Largin.** A silver albumin compound. It is a gray powder, soluble in water (1 : 10). Used locally as an astringent and antiseptic in the strength of from 1 : 500 to 1 : 75.

***Lavandula** (Lavender-flowers).

Oleum Lavandulæ.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Spiritus Lavandulæ.

Dose, 0.6–2.0 C.c., 10–32 ♏.

Tinctura Lavandulæ Composita.
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Leptandra (Leptandra—Culver's Root). The rhizome and roots of *Veronica virginica.*
Dose, 0.3–1.9 Gm., 5–30 gr., in powder.
Extractum Leptandræ.
Dose, 0.065–0.52 Gm., 1–8 gr.
Extractum Leptandræ Fluidum.
Dose, 0.3–1.8 Gm., 5–30 ♏.
**Leptandrinum.*
Dose, 0.065–0.32 Gm., 1–5 gr.

Limonis Cortex (Lemon-peel). The rind of the recent fruit of *Citrus Limonum.*
Dose, 0.065–0.32 Gm., 1–5 gr.
Oleum Limonis.
Dose, 0.06–0.3 C.c., 1–5 ♏.
Spiritus Limonis.
Dose, 1.8–3.7 C.c., 30–60 ♏.

Limonis Succus (Lemon-juice). The freshly-expressed juice of the ripe fruit of *Citrus Limonum.*
Dose, any quantity.
Acidum Citricum.
Dose, 0.32–1.0 Gm., 5–15 gr.
Syrupus Acidi Citrici.
Dose, 3.7–15.0 C.c., 1–4 fʒ.

Linimentum Ammoniæ (Ammonia Liniment—Volatile Liniment). Composition: ammonia-water, 35 C.c.; alcohol, 5 C.c.; cotton-seed oil, 60 C.c.

Linimentum Belladonnæ (Belladonna Liniment). Composition: camphor, 5 Gm.; fluid extract of belladonna-root, sufficient to make 100 C.c.

Linimentum Calcis (Lime Liniment—Carron Oil). Equal parts of solution of lime and linseed oil.

Linimentum Camphoræ (Camphor Liniment). Composition: camphor, 20 Gm.; cotton-seed oil, 80 Gm.

Linimentum Chloroformi (Chloroform Liniment). Chloroform, 30 C.c.; soap liniment, 70 C.c.

Linimentum Saponis (Soap Liniment). Composition: soap, 7 Gm.; camphor, 4.5 Gm.; oil of rosemary, 1. C.c.; alcohol, 75 C.c,; and water, sufficient to make 100 C.c.

Linimentum Saponis Mollis (Liniment of Soft Soap—Tinctura Saponis Viridis, Pharm. 1880). Composition: soft soap, 65 Gm.; oil of lavender, 2 C.c.; alcohol, 30 C.c.; water, sufficient to make 100 C.c.

Linimentum Sinapis Compositum (Compound Liniment of Mustard). Composition: volatile oil of mustard, 3 C.c.; fluid extract of mezereum, 20 C.c.; camphor, 6 Gm.; castor oil, 15 C.c.; alcohol, sufficient to make 100 Gm.

Linimentum Terebinthinæ (Turpentine Liniment). A soft solid. Composition, resin cerate, 65 C.c.; oil of turpentine, 35 Gm.

Linum (Linseed—Flaxseed) The seed of *Linum usitatissimum.* The mucilage, made by treating the whole seed with water, may be taken at liberty as a demulcent.

Oleum Lini. Combined with solution of lime in treatment of burns.

***Lipanin.** A liquid consisting of oleic acid 6 parts, olive oil 100 parts.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Liquor Acidi Arsenosi (Solution of Arsenous Acid). Contains about 1 per cent. of arsenous acid and 5 per cent. of diluted hydrochloric acid.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Ammonii Acetatis (Solution of Ammonium Acetate—Spirit of Mindererus). Contains about 7 per cent. of ammonium acetate.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Liquor Arseni et Hydrargyri Iodidi (Solution of Arsenic and Mercuric Iodide—Donovan's Solution). Contains about 1 per cent. each of arsenic iodide and red mercuric iodide.

Dose, 0.06–0.18 C.c., 1–3 ♏.

*__Liquor Arseni Bromidi__ (Solution of Arsenic Bromide—Clemen's Solution). Contains 1 per cent. of arsenic bromide.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Calcis (Solution of Lime—Solution of Calcium Hydrate, Lime-water). Contains about 0.17 per cent. of calcium hydrate.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Liquor Ferri Acetatis (Solution of Ferric Acetate). Contains about 31 per cent. of ferric acetate.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Liquor Ferri Chloridi (Solution of Ferric Chloride). Contains about 31 per cent. of ferric chloride.

Dose, 0.3–0.6 C.c., 5–10 ♏.

Liquor Ferri Citratis (Solution of Ferric Citrate). Equal in strength to about 7.5 per cent. of metallic iron.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Liquor Ferri et Ammonii Acetatis (Solution of Iron and Ammonium Acetate—Mistura Ferri et Ammonii Acetatis, Pharm. 1880; Basham's Mixture). Contains—tincture of ferric chloride, 2 C.c.; diluted acetic acid, 3 C.c.; solution of ammonium acetate, 20 C.c.; aromatic elixir, 10 C.c.; water, to make 100 C.c.

Dose, 7.5–30.0 C.c., 2–8 fʒ.

Liquor Ferri Nitratis (Solution of Ferric Nitrate). Contains about 6.2 per cent. of ferric nitrate.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Ferri Subsulphatis (Solution of Ferric Subsulphate —Solution of Basic Ferric Sulphate, Monsel's Solution). Corresponds in strength to about 13.6 per cent. of metallic iron.

Dose, 0.3–0.6 C.c., 5–10 ♏.

Liquor Ferri Tersulphatis (Solution of Ferric Sulphate). Contains about 28.7 per cent. of ferric sulphate. Used for making arsenic antidote.

Liquor Hydrargyri Nitratis (Solution of Mercuric Nirtate). Contains 60 per cent. of mercuric nitrate and 11 per cent. of nitric acid. Used locally as a powerful caustic.

Liquor Iodi Compositus (Compound Solution of Iodine—Lugol's Solution). Contains 5 per cent. of iodine and 10 per cent. of potassium iodide.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Liquor Magnesii Citratis (Solution of Magnesium Citrate).

Dose, 180.0–360.0 C.c., 6–12 f℥.

Liquor Plumbi Subacetatis (Solution of Lead Subacetate—Goulard's Extract). Contains about 25 per cent. of lead subacetate. Used externally.

Liquor Plumbi Subacetatis Dilutus (Diluted Solution of Lead Subacetate—Lead-water). Contains 3 per cent. of the solution of lead subacetate. Used externally.

Liquor Potassæ (Solution of Potassa—Solution of Potassium Hydrate). Contains about 5 per cent. of potassium hydrate.

Dose, 0.3–1.8 C.c., 5–30 ♏.

Liquor Potassii Arsenitis (Solution of Potassium Arsenite —Fowler's Solution). About 1 per cent. of arsenous acid, 2 per cent. of potassii bicarbonate, and 3 per cent. of compound tincture of lavender enter into the manufacture of this preparation.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Potassii Citratis (Solution of Potassium Citrate—Mistura Potassii Citratis). Contains about 9 per cent. of anhydrous potassium citrate.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Liquor Sodæ (Solution of Soda—Solution of Sodium Hydrate). Contains about 5 per cent. of sodium hydrate.

Dose, 0.3–1.8 C.c., 5–30 ♏.

Liquor Sodæ Chloratæ (Solution of Chlorinated Soda—Labarraque's Solution). Contains about 2.6 per cent. by weight of available chlorine.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Liquor Sodii Arsenatis (Solution of Sodium Arsenate—Pearson's Solution). Contains about 1 per cent. of sodium arsenate.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Sodii Silicatis (Solution of Sodium Silicate—Soluble Glass). Employed exclusively as a dressing.

Liquor Zinci Chloridi (Solution of Zinc Chloride). Used as a disinfectant.

***Lithium.**

Lithii Benzoas (Lithium Benzoate). A white crystalline powder or small glistening scales.

Dose, 0.32–1.9 Gm., 5–30 gr.

Lithii Bromidum (Lithium Bromide). A white, deliquescent powder, more or less granular.

Dose, 0.65–3.0 Gm., 10–47 gr.

Lithii Carbonas (Lithium Carbonate). A light white powder.

Dose, 0.13–0.65 Gm., 2–10 gr.

Lithii Citras (Lithium Citrate). A white amorphous powder deliquescent upon exposure to air.

Dose, 0.32–1.3 Gm., 5–20 gr.

Lithii Citras Effervescens (Effervescent Lithium Citrate). A white granular powder.

Dose, 3.9–15.5 Gm., 1–4 ʒ.

Lithii Salicylas (Lithium Salicylate). A white deliquescent powder.

Dose, 0.65–2.0 Gm., 10–31 gr.

Lobelia (Lobelia—Indian Tobacco). The leaves and tops of *Lobelia inflata*, collected after a portion of the capsules have become inflated.

Extractum Lobeliæ Fluidum.

Dose, 0.06–0.3 C.c., 1–5 ♏, as expectorant or depressant; 1.0–3.7 C.c., 16–60 ♏, as emetic.

Tinctura Lobeliæ.

Dose, 0.3–2.0 C.c., 5–32 ♏; as an emetic, up to 7.5 C.c., 2 fʒ.

Lupulinum (Lupulin). The glandular powder separated from the strobiles of *Humulus Lupulus.*

Dose, 0.65–1.0 Gm., 10–15 gr., in infusion.

Extractum Lupulini Fluidum.

Dose, 0.6–1.0 C.c., 10–16 ♏.

Oleoresina Lupulini.

Dose, 0.13–0.32 C.c., 2–5 ♏.

Lycopodium (Lycopodium). A pale-yellow powder unctuous to the touch, consisting of the spores of *Lycopodium clavatum* and of other species of *Lycopodium.* Used as a dusting-powder.

***Lysol.** A clear, brown, oily liquid consisting of saponified phenols or creosols. Used locally as an antiseptic in 1 to 3 per cent. aqueous solutions.

Macis (Mace). The arillode of the seed of *Myristica fragrans.*

Dose, 0.32–0.65 Gm., 5–10 gr.

***Magnesium.**

Magnesia (Magnesia—Light Magnesia, Calcined Magnesia, Husband's Magnesia). A fine, light white powder.

Dose, 2.0–4.0 Gm., 31–62 gr.

Magnesia Ponderosa (Heavy Magnesia). A white, dense, and very fine powder.

Dose, 2.0–4.0 Gm., 32–62 gr.

Magnesii Carbonas (Magnesium Carbonate). Light white, friable blocks, lumps, or masses, or fine, light white powder.

Dose, 0.65–1.0 Gm., 10–15 gr.

Magnesii Citras Effervescens (Effervescent Magnesium Citrate). A white, granular, deliquescent salt.

Dose, 2.0–6.0 Gm., 31–93 gr.

Magnesii Sulphas (Magnesium Sulphate—Epsom Salt). Small colorless crystals.

Dose, 7.8–31.1 Gm., 2–8 ʒ.

Liquor Magnesii Citratis.

Dose, 180.0–360.0 C.c., 6–12 f℥.

***Manganese.**

Mangani Dioxidum (Manganese Dioxide—Mangani Oxidum Nigrum, Pharm. 1880; Black Oxide of Manganese). Heavy black or grayish-black gritty powder.

Dose, 0.065–0.32 Gm., 1–5 gr.

Mangani Sulphas (Manganese Sulphate—Manganous Sulphate). Colorless or pale-rose-colored crystals.

Dose, 0.13–0.32 Gm., 2–5 gr.

Potassii Permanganas.

Dose, 0.032–0.19 Gm., ½–3 gr.

Manna (Manna). Concrete exudation of *Fraxinus ornus.*

Dose, 3.9–31.1 Gm., 1 ʒ–1 ℥.

Infusum Sennæ Compositum.

Dose, 60.0–240.0 C.c., 2–8 fʒ.

Marrubium (Marrubium—Horehound). The leaves and tops of *Marrubium vulgare*.

Dose, 1.9–3.9 Gm., ½–1 ʒ, in infusion.

Massa Copaibæ (Mass of Copaiba—Solidified Copaiba). Contains about 94 per cent. of copaiba and 6 per cent. of magnesia.

Dose, 0.65–4.0 Gm., 10–62 gr.

Massa Ferri Carbonatis (Mass of Ferrous Carbonate—Vallet's Mass). Contains about 35 per cent. of ferrous carbonate.

Dose, 0.19–0.65 Gm., 3–10 gr.

Massa Hydrargyri (Mass of Mercury—Pilulæ Hydrargyri, Blue Mass, Blue Pill). Contains about 33 per cent. of metallic mercury.

Dose, 0.13–1.3 Gm., 2–20 gr.

Mastiche (Mastic). A concrete, resinous exudation from *Pistacia Lentiscus*. Used exclusively as an excipient.

Pilulæ Aloes et Masticies.

Dose, 1–3.

Matico (Matico) The leaves of *Piper angustifolium*.

Dose, 1.9–3.9 Gm., ½–1 ʒ, in decoction.

Extractum Matico Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Matico.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Matricaria (Matricaria—German Chamomile). The flowering tops of *Matricaria Chamomilla*.

Dose, 15.0–30.0 Gm., ½–1 ℥., in infusion.

Mel (Honey).

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Mel Despumatum (Clarified Honey).

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Mel Rosæ (Honey of Rose). About 12 per cent. of fluid extract of rose enters into the manufacture of this preparation.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Melissa (Melissa—Balm). The leaves and tops of *Melissa officinalis.*

Dose, 3.9–15.0 Gm., 1–4 ʒ, in infusion.

Menispermum (Menispermum—Yellow Parilla, Canadian Moonseed). The rhizome and roots of *Menispermum canadense.*

Extractum Menispermi Fluidum.

Dose, 0.3–1.8 C.c., 5–30 ♏.

Mentha Piperita (Peppermint). The leaves and tops of *Mentha piperita.*

Aqua Menthæ Piperitæ.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Menthol. A stearopten obtained from oil of peppermint.

Dose, 0.032–0.065 Gm., ½–1 gr. Most frequently used locally.

Oleum Menthæ Piperitæ.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Spiritus Menthæ Piperitæ.

Dose, 0.6–1.8 C.c., 10–20 ♏.

Trochisci Menthæ Piperitæ.

Dose, 1, as required.

Mentha Viridis (Spearmint). The leaves and tops of *Mentha viridis.*

Aqua Menthæ Viridis.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Oleum Menthæ Viridis.

Dose. 0.06–0.3 C.c., 1–5 ♏.

Spiritus Menthæ Viridis.

Dose, 1.2–2.5 C.c., 20–40 ♏.

***Methyl Blue.** (See *Pyoktanin*).

***Methyl Chloridum** (Methyl Chloride). A colorless, very volatile liquid. Used locally as an anæsthetic in the form of a spray.

Methyl Salicylas (Methyl Salicylate—Artificial or Synthetic Oil of Wintergreen). A colorless or slightly yellowish liquid.

Dose, 0.6–2.0 Gm., 10–32 ♏, or more.

***Methylene Blue** (Tetramethylthionine Chloride). An aniline derivative consisting of a bluish crystalline or scaly powder.

Dose, 0.13–0.25 Gm., 2–4 gr.

Mezereum (Mezereum). The bark of *Daphne Mezereum* and of other species of *Daphne.*

Extractum Mezerei Fluidum. Mostly externally as a counter-irritant. It may be given internally, well diluted, in doses of 0.3 C.c., 5 ♏.

Mistura Cretæ (Chalk Mixture). Composition: compound chalk-powder, 20.0 Gm.; cinnamon-water, 40.0 C.c.; water to make 100 C.c.

Dose, 3.7–15.0 C.c., 1–4 f℥.

Mistura Ferri Composita (Compound Iron Mixture—Griffith's Mixture). Ferrous sulphate, 0.6 Gm.; myrrh, 1.8 Gm.; sugar, 1.8 Gm.; potassium carbonate, 0.8 Gm.; spirit of lavender, 6 C.c.; rose-water to 100 C.c.

Dose, 3.7–15.0 C.c., 1–4 f℥.

Mistura Glycyrrhizæ Composita (Compound Mixture of Glycyrrhiza—Brown Mixture). Composition: pure extract of glycyrrhiza, 3.0 Gm.; syrup, 5.0 C.c.; mucilage of acacia, 10.0 C.c.; camphorated tincture of opium, 12.0 C.c.; wine of antimony, 6.0 C.c.; spirit of nitrous ether, 3.0 C.c.,; water to make 100 C.c.

Dose, 3.7–15.0 C.c., 1–4 f℥.

Mistura Rhei et Sodæ (Mixture of Rhubarb and Soda). Composition: sodium bicarbonate, 3.5 Gm.; fluid extract of ipecac, 0.3 C.c.; fluid extract of rhubarb, 1.5 C.c.; glycerin, 35.0 C.c.; spirit of peppermint, 3.5 C.c.; water to make 100 C.c.

Dose, 1.8–7.50 C.c., $\frac{1}{2}$–2 fʒ.

Morphina (Morphine). An alkaloid obtained from opium.

Dose, 0.0081–0.021 Gm., $\frac{1}{8}$–$\frac{1}{3}$ gr.

Morphinæ Acetas (Morphine Acetate).

Dose, 0.0081–0.032 Gm., $\frac{1}{8}$–$\frac{1}{2}$ gr.

**Morphinæ-diacetyli Hydrochloras* (Diacetyl-morphine Hydrochlorate — Heroin Hydrochlorate). A white, crystalline, slightly bitter substance, sparingly soluble in water.

Dose, 0.003–0.005 Gm., $\frac{1}{24}$–$\frac{1}{12}$ gr.

**Morphinæ-ethyli Hydrochloras* (Ethyl-morphine Hydrochlorate—Dionin). A white, crystalline morphine derivative, readily soluble in alcohol and water.

Dose, 0.006–0.01 Gm., $\frac{1}{12}$–$\frac{1}{6}$ gr.

Morphinæ Hydrochloras (Morphine Hydrochlorate).

Dose, 0.0081–0.032 Gm., $\frac{1}{8}$–$\frac{1}{2}$ gr.

Morphinæ Sulphas (Morphine Sulphate).

Dose, 0.0081–0.032 Gm., $\frac{1}{8}$–$\frac{1}{2}$ gr.

Pulvis Morphinæ Compositus.

Dose, 0.32–0.65 Gm., 5–10 gr.

Trochisci Morphinæ et Ipecacuanhæ.

Dose, 1, as required.

Moschus (Musk). The dried secretion from the preputial follicles of *Moschus moschiferus.*

Dose, 0.32–0.65 Gm., 5–10 gr.

Tinctura Moschi.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Mucilago Acaciæ (Mucilage of Acacia). Contains about 34 per cent. of acacia.

Dose, 3.7–15.0 C.c., 1–4 fʒ, or more.

Mucilago Sassafras Medullæ (Mucilage of Sassafras-pith). Made with 2 Gm. of sassafras-pith; water to make 100 C.c.

Dose, 3.7–15.0 C.c., 1–4 fʒ, or more.

Mucilago Tragacanthæ (Mucilage of Tragacanth). Contains about 6 per cent. of tragacanth and 18 per cent. of glycerin.

Dose, 3.7–15.0 C.c., 1–4 fʒ, or more.

Mucilago Ulmi (Mucilage of Elm). Made with 6 Gm. of elm-bark; water to make 100 C.c.

Dose, 3.7–15.0 C.c., 1–4 fʒ, or more.

Myristica (Nutmeg). The seed of the *Myristica fragrans* deprived of its testa.

Dose, 0.3–1.3 Gm., 5–20 gr.

Olei Myristicæ.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Pulvis Aromaticus.

Dose, 0.65–2.0 Gm., 10–31 gr.

Spiriti Myristicæ.

Dose, 0.6–1.2 C.c., 10–20 ♏.

Tinctura Lavandulæ Composita.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Myrrha (Myrrh). A gum-resin from *Commiphora Myrrha.*

Dose, 0.065–0.3 Gm., 1–5 gr.

Pilulæ Aloes et Myrrhæ.

Dose, 1–3 pills.

Tinctura Aloes et Myrrhæ.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Tinctura Myrrhæ.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Naphtalinum (Naphtalin—Naphtalene, Coal-tar Camphor). A hydrocarbon obtained from coal-tar. Usually seen in colorless crystalline lamellæ.

Dose, 0.01–0.065 Gm., $\frac{1}{6}$–10 gr.

Naphtol (Naphtol—Beta-naphtol). A phenol occurring in coal-tar. Usually seen in small, buff-colored, shining lamellæ.

Dose, 0.065–0.3 Gm., 1–5 gr.

***Nirvanin.** It occurs in colorless crystals and is freely soluble in water; in the strength of a 2–5 per cent. aqueous solution it is used as a local anesthetic.

Nux Vomica (Nux Vomica). The seeds of *Strychnos Nux-vomica.*

Dose, 0.06–0.3 Gm., 1–5 gr.

**Brucina* (Brucine).

Dose, 0.001–0.0032 Gm., $\frac{1}{60}$–$\frac{1}{20}$ gr.

Extractum Nucis Vomicæ.

Dose, 0.01–0.0032 Gm., $\frac{1}{6}$–$\frac{1}{2}$ gr.

Extractum Nucis Vomicæ Fluidum.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Ferri et Strychninæ Citras.

Dose, 0.065–0.19 Gm., 1–3 gr.

Strychnina.

Dose, 0.01–0.0016 Gm., $\frac{1}{60}$–$\frac{1}{40}$ gr.

Strychninæ Sulphas.

Dose, 0.001–0.0032 Gm., $\frac{1}{60}$–$\frac{1}{20}$ gr.

Syrupus Ferri, Quininæ et Strychninæ Phosphatum.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Nucis Vomicæ.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Oleatum Hydrargyri (Oleate of Mercury). Made with 20 per cent. of yellow mercurous oxide and 80 per cent. of oleic acid. Used locally.

Oleatum Veratrinæ (Oleate of Veratrine). Made with 2 per cent. of veratrine and 98 per cent. of oleic acid. Used locally with care.

Oleatum Zinci (Oleate of Zinc). Made with 5 per cent. of zinc oxide and 95 per cent. of oleic acid. Used locally.

Oleoresina Aspidii (Oleoresin of Aspidium).
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Oleoresina Capsici (Oleoresin of Capsicum).
Dose, 0.016–0.06 C.c., ¼–1 ♏.

Oleoresina Cubebæ (Oleoresin of Cubeb).
Dose, 0.3–1.2 C.c., 5–20 ♏.

Oleoresina Lupulini (Oleoresin of Lupulin).
Dose, 0.12–0.3 C.c., 2–5 ♏.

Oleoresina Piperis (Oleoresin of Pepper).
Dose, 0.016–0.06 C.c., ¼–1 ♏.

Oleoresina Zinigberis (Oleoresin of Ginger).
Dose, 0.03–0.06 C.c., ½–1 ♏.

Oleum Adipis (Lard Oil). A fixed oil expressed from lard. Used locally.

Oleum Æthereum (Ethereal Oil—Heavy Oil of Wine). A volatile liquid consisting of equal volumes of heavy oil of wine and ether. Employed in making the compound spirit of ether.

Oleum Amygdalæ Amare (Oil of Bitter Almond). A volatile oil obtained from bitter almond.
Dose, 0.015–0.03 C.c., ¼–½ ♏.

Oleum Amygdalæ Expressum (Expressed Oil of Almond). A fixed oil expressed from almonds. Has powerful poisonous properties.
Dose, 3.7–30.0 C.c., 1–8 fʒ.

Oleum Anisi (Oil of Anise). A volatile oil distilled from anise.
Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Aurantii Corticis (Oil of Orange-peel). A volatile oil obtained from the fresh peel of bitter orange, *Citrus vulgaris*, or the sweet orange, *Citrus aurantium.*

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Aurantii Florum (Oil of Orange-flowers—Oil of Neroli). A volatile oil distilled from the fresh flowers of the bitter orange, *Citrus vulgaris.* Used as a flavoring agent.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Bergamottæ (Oil of Bergamot—Oleum Bergamii, Pharm. 1880). A volatile oil obtained by expression from the rind of the fresh fruit of *Citrus Bergamia.* Used to give a pleasant odor to various preparations intended for local application.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Betulæ Volatile (Volatile Oil of Betula—Oil of Sweet Birch). A volatile oil obtained by distillation from the bark of *Betula lenta.*

Dose, 0.6–2.0 C.c., 10–32 ♏.

Oleum Cadinum (Oil of Cade—Oleum Juniperi Empyreumaticum). Product of dry distillation of the wood of *Juniperus Oxycedrus.* Used mostly externally.

Dose, 0.18–0.3 C.c., 3–5 ♏.

Oleum Cajaputi (Oil of Cajaput). A volatile oil distilled from the leaves of *Melaleuca Leucadendron.* Used mostly externally.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Oleum Cari (Oil of Caraway). A volatile oil distilled from caraway.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Caryophylli (Oil of Cloves). A volatile oil distilled from cloves.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Chenopodii (Oil of Chenopodium—Oil of American Wormseed). A volatile oil distilled from *Chenopodium.*

Dose, 0.3–0.6 C.c., 5–10 ♏.

Oleum Cinnamomi (Oil of Cinnamon—Oil of Cassia). A volatile oil distilled from Cassia Cinnamon.

Dose, 0.06–0.18 C.c., 1–3 ♏.

Oleum Copaibæ (Oil of Copaiba). A volatile oil distilled from copaiba.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Oleum Coriandri (Oil of Coriander). A volatile oil distilled from coriander.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Cubebæ (Oil of Cubeb). A volatile oil distilled from cubeb.

Dose, 0.3–1.0 C.c., 5–16 ♏.

***Oleum Dipterocarpi** (Gurjun Balsam—Wood-oil, Balsamum Dipterocarpi). An oleoresin obtained from trees of the genus *Dipterocarpus.*

Dose, 0.6–3.7 C.c., 10–60 ♏.

Oleum Erigerontis (Oil of Erigeron—Oil of Fleabane). A volatile oil distilled from the fresh flowering-herb of *Erigeron canadense.*

Dose, 0.3–2.0 C.c., 5–32 ♏.

Oleum Eucalypti (Oil of Eucalyptus). A volatile oil distilled from the fresh leaves of several species of eucalyptus.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Oleum Fœniculi (Oil of Fennel). A volatile oil distilled from fennel.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Gaultheriæ (Oil of Gaultheria—Oil of Wintergreen). A volatile oil distilled from the leaves of *Gaultheria.*

Dose, 0.6–2.0 C.c., 10–32 ♏.

Oleum Gossypii Seminis (Cotton-seed Oil). A fixed oil expressed from cotton-seed. Used in liniments.

Oleum Hedeomæ (Oil of Hedeoma—Oil of Pennyroyal). A volatile oil distilled from hedeoma.

Dose, 0.06–0.6 C.c., 1–10 ♏.

Oleum Juniperi (Oil of Juniper). A volatile oil distilled from the fruit of *Juniperus communis.*

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Lavandulæ Florum (Oil of Lavender-flowers). A volatile oil distilled from fresh lavender-flowers.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Limonis (Oil of Lemon). A volatile oil obtained by expression from fresh lemon-peel.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Lini (Linseed Oil—Oil of Flaxseed). A fixed oil expressed from linseed without the use of heat. Mostly used externally.

Dose, 30.0–60.0 C.c., 1–2 f℥.

Oleum Menthæ Piperitæ (Oil of Peppermint). A volatile oil distilled from peppermint.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Menthæ Viridis (Oil of Spearmint). A volatile oil distilled from spearmint.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Morrhuæ (Cod-liver Oil—Oleum Jecoris Aselli). A fixed oil obtained from the fresh livers of *Gadus Morrhua* and other species of *Gadus.*

Dose, 0.6–30.0 C.c., 10 ♏–1 f℥.

Oleum Myrciæ (Oil of Myrcia—Oil of Bay). A volatile oil distilled from the leaves of *Myrcia acris.* Used for making bay-rum.

Oleum Myristicæ (Oil of Nutmeg). A volatile oil distilled from nutmeg.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Olivæ (Olive Oil). A fixed oil expressed from the ripe fruit of *Olea europæa.*

Dose, 1.0–60.0 C.c., 15 ♏–2 f℥.

Oleum Phosphoratum (Phosphorated Oil). Each 100 C.c. contains phosphorus, 1 Gm.; expressed oil of almond, 90 Gm.; ether, 9 Gm. Each minim, 0.064 Gm., of the oil represents about $\frac{1}{100}$ gr., 0.00064 Gm., of phosphorus.

Dose, 0.06–0.12 C.c., 1–2 ♏.

Oleum Picis Liquidæ (Oil of Tar). A volatile oil distilled from tar. Also used locally.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Pimentæ (Oil of Pimenta—Oil of Allspice). A volatile oil distilled from pimenta.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Ricini (Castor Oil). A fixed oil expressed from the seed of *Ricinus communis.*

Dose, 3.7–30.0 C.c., 1 fʒ–1 f℥.

Oleum Rosæ (Oil of Rose). A volatile oil distilled from the fresh flowers of *Rosa damascena.* Used to give a pleasant odor to various pharmaceutical preparations.

Oleum Rosmarini (Oil of Rosemary). A volatile oil distilled from the leaves of *Rosmarinus officinalis.*

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Sabinæ (Oil of Savine). A volatile oil distilled from savine.

Dose, 0.3–0.6 C.c., 5–10 ♏.

Oleum Santali (Oil of Santal). A volatile oil distilled from the wood of *Santalum album.*

Dose, 0.3–1.2 C.c., 5–20 ♏.

Oleum Sassafras (Oil of Sassafras). A volatile oil distilled from sassafras.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Sesami (Oil of Sesamum—Sesame Oil, Teel Oil, Benne Oil). A fixed oil expressed from the seed of *Sesamum indicum.* Mostly used in hair-oils.

Oleum Sinapis Volatile (Volatile Oil of Mustard). A volatile oil obtained from black mustard. Used externally as epispastic.

Oleum Terebinthinæ (Oil of Turpentine). A volatile oil distilled from turpentine.

Oleum Terebinthinæ Rectificatum. The rectified oil.

Dose, 0.3–1.2 C.c., 5–20 ♏; as a tænicide, ½–1 ℥, but not considered safe.

Oleum Theobromatis (Oil of Theobroma—Butter of Cacao). A fixed solid oil expressed from the seed of *Theobroma cacao.* Used as base for suppositories, as it melts at about the temperature of the human body.

Oleum Thymi (Oil of Thyme). A volatile oil distilled from the leaves and flowering tops of *Thymus vulgaris.*

Dose, 0.06–0.3 C.c., 1–5 ♏.

Oleum Tiglii (Croton Oil). A fixed oil expressed from the seed of *Croton Tiglium.*

Dose, 0.06 C.c., 1 ♏, diluted with about 5 drops of olive oil.

Opium[1] (Opium). The concrete milky exudation from the unripe capsules of the white poppy (*Papaver somniferum*). Should contain not less than 9 per cent. of morphine.

Dose, 0.03–0.13 Gm., ½–2 gr.

Acetum Opii.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Codeinæ.

Dose, 0.03–0.13 Gm., ½–2 gr.

[1] Children bear opium very badly, and if any of its preparations are administered to them, the quantity should be very minute.

[illegible] Should contain about 18 per cent. of [illegible] morphine.

[illegible] Gm., ¼–1 gr.

[illegible]

[illegible] Gm., ⅛–½ gr.

[illegible]

[illegible] Gm., ⅛–½ gr.

[illegible]

[illegible] Gm., ⅛–½ gr.

[illegible] Opium). Should contain not less [illegible] than 15 per cent. of crystallized [illegible]

[illegible] Gm., ½–2 gr.

[illegible] Deodorized Opium). Same strength [illegible]

[illegible] Gm., ½–2 gr.

[illegible]

[illegible]

[illegible]

[illegible] gr.

[illegible]

[illegible] gr.

[illegible]

Vinum Opii.

Dose, 0.3–1.2 C.c., 5–20 ♏.

***Orexin Tannas** (Orexin Tannate). A yellowish, almost tasteless powder, insoluble in water.

Dose, 0.32–0.6 Gm., 5–10 gr.

***Orphol** (Basic Bismuth-beta-naphtolate). A light, reddish-brown, insoluble powder.

Dose, 0.32–0.6 Gm., 5–10 gr.

***Orthoform** (Methyl-para-amido-meta-oyxbenzoate). A white, amorphous, odorless, and tasteless powder; very sparingly soluble in water. Used in the form of powder or ointment as a local anesthetic.

Dose, 0.32–1.0 Gm., 5–15 gr.

***Orthoform, New** (Meta-amido-para-oxybenzoic-methyl-ester). This new preparation is cheaper than the original orthoform and is of the same power, and is said to be of equal value.

Dose, 0.32–1.0 Gm., 5–15 gr.

***Ovarian Extract.** The desiccated ovarian glands of sheep.

Dose, 0.12–0.32 Gm., 2–5 gr.

***Oxycamphor.** A white, crystalline substance, sparingly soluble in water and freely soluble in alcohol.

Dose, 0.32–2.0 Gm., 5–30 gr.

Pancreatinum (Pancreatine). A mixture of enzymes usually prepared from the pancreas of hogs.

Dose, 0.65–1.9 Gm., 10–30 gr.

***Pane's Serum** (Anti-pneumococcic Serum). Used hypodermically.

Dose, 10.0–20.0 C.c., 2½–5 f℥.

***Papayotinum** (Papayotin—Papain). A white powdered principle obtained from *Carica papaya.* Attracts moisture upon exposure to the air.

Dose, 0.065–0.32 Gm., 1–5 gr. Also used locally in 5 per cent. aqueous solution.

Paraldehydum (Paraldehyde). A polymeric form of ethylic aldehyde.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Pareira (Pareira—Pareira Brava). The root of *Chondodendron tomentosum.*

Extractum Pareiræ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ

***Parotid Gland.** The desiccated parotid gland of sheep.

Dose, 0.6–4.0 Gm., 10–60 gr., daily.

***Pelletierinæ Tannas** (Pelletierine Tannate). The tannate of an alkaloid obtained from the bark of pomegranate trees.

Dose, 0.19–0.32 Gm., 3–5 gr.

Pepo (Pumpkin-seed). The seed of *Cucurbita pepo.*

Dose, 62.0 Gm., 2 ℥, in emulsion.

Pepsinum (Pepsin). An enzyme obtained from the glandular layer of the fresh stomach of the pig. It should be capable of fully digesting 3000 times its own weight of freshly-coagulated and disintegrated egg-albumin.

Dose, 0.65–3.9 Gm., 10–60 gr.

Pepsinum Saccharatum (Saccharated Pepsin). Each 1 Gm., 15 grains, contains 0.1 Gm., or about 1½ grains, of pepsin, and 0.9 Gm., or about 13½ grains, of sugar of milk.

Petrolatum Liquidum (Liquid Petroleum). A mixture of hydrocarbons obtained from crude petroleum. Used locally.

Petrolatum Molle (Soft Petroleum—Petroleum, Pharm. 1880; Soft Petroleum Ointment). A mixture of hydrocarbons obtained from crude petroleum. Used locally. When petroleum is prescribed or ordered without specification, soft petroleum (petrolatum molle) is dispensed.

Petrolatum Spissum (Hard Petroleum—Petrolatum, Pharm. 1880; Hard Petroleum Ointment). A mixture of hydrocarbons obtained from crude petroleum. Used locally.

***Phenacetinum** (Phenacetin). A crystalline substance produced by the action of glacial acetic acid on paraphenetidin.

Dose, 0.65–1.0 Gm., 10–15 gr.

***Phenocoll Hydrochloride.** A synthetic compound produced by the interaction of phenetidin and glycocoll (amido-acetic acid).

Dose, 0.32–0.65 Gm., 5–10 gr.

Phosphorus (Phosphorus). A non-metallic element obtained from bones.

Dose, 0.0006–0.0013 Gm., $\frac{1}{100}$–$\frac{1}{50}$ gr.

Elixir Phosphori.

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Oleum Phosphoratum.

Dose, 0.06–0.12 C.c., 1–2 ♏.

Pilulæ Phosphori.

Dose, 1–2.

Spiritus Phosphori.

Dose, 0.5–1.0 C.c., 8–16 ♏.

Zinci Phosphidum.

Dose, 0.0026–0.0054 Gm., $\frac{1}{25}$–$\frac{1}{12}$ gr.

Physostigma (Physostigma—Calabar Bean). The seed of *Physostigma venenosum.*

Extractum Physostigmatis.

Dose, 0.004–0.008 Gm., $\frac{1}{16}$–$\frac{1}{8}$ gr.

Physostigminæ Salicylas (Eserine Salicylate).

Dose, 0.00043–0.00064 Gm., $\frac{1}{150}$–$\frac{1}{100}$ gr.

Physostigminæ Sulphas (Eserine Sulphate).

Dose, 0.00043–0.0064 Gm., $\frac{1}{150}$–$\frac{1}{100}$ gr.

Both salts used as mydriatics in solutions of 1 or 4 gr. in an ounce of distilled water.

Tinctura Physostigmatis.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Phytolaccæ Fructus (Phytolacca-fruit—Phytolaccæ Bacca, Pharm. 1880; Poke-berry). The fruit of *Phytolacca decandra.*

Dose, 0.065–1.9 Gm., 1–30 gr., in infusion.

Phytolaccæ Radix (Phytolacca-root—Poke-root). The root of *Phytolacca decandra.*

Dose, 0.065–0.32 Gm., 1–5 gr., as alterative.

Extractum Phytolaccæ Radicis Fluidum.

Dose, 0.06–1.8 C.c., 1–30 ♏.

Picrotoxinum (Picrotoxin). A neutral principle obtained from Cocculus indicus.

Dose, 0.001–0.0016 Gm., $\frac{1}{64}$–$\frac{1}{40}$ gr.

Pilocarpus (Pilocarpus—Jaborandi). The leaflets of *Pilocarpus Selloanus* and *P. Jaborandi.*

Dose, 1.9–3.9 Gm., ½–1 ʒ, in infusion.

Extractum Pilocarpi Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Pilocarpinæ Hydrochloras.

Dose, 0.008–0.032 Gm., ⅛–½ gr.

Pilulæ Aloes (Pills of Aloes). Each pill contains about 0.13 Gm., 2 gr., each, of purified aloes and soap.

Dose, 1–3.

Pilulæ Aloes et Asafœtidæ (Pills of Aloes and Asafetida). Each pill contains about 0.09 Gm., about 1½ gr., each, of purified aloes, asafetida, and soap.

Dose, 1–3.

Pilulæ Aloes et Ferri (Pills of Aloes and Iron). Each pill contains about 0.07 Gm., about 1 gr., each, of purified aloes, dried ferrous sulphate, and aromatic powder, with confection of rose sufficient to make mass.

Dose, 1–3.

Pilulæ Aloes et Mastiches (Pills of Aloes and Mastich—Lady Webster Dinner-pills). Each pill contains—aloes, 0.13 Gm., or 2 gr.; mastich, 0.04 Gm., or about $\frac{3}{5}$ gr.; red rose, 0.03 Gm., or about $\frac{1}{2}$ gr.

Dose, 1–3.

Pilulæ Aloes et Myrrhæ (Pills of Aloes and Myrrh). Each pill contains—purified aloes, 0.13 Gm., or 2 gr.; myrrh, 0.06 Gm., or about $\frac{9}{10}$ gr.; aromatic powder, 0.04 Gm., or about $\frac{3}{5}$ gr.

Dose, 1–3.

Pilulæ Antimonii Compositæ (Compound Pills of Antimony—Plummer's Pills). Each pill contains—sulphurated antimony, mild mercurous chloride, *āā* 0.04 Gm., or about $\frac{2}{3}$ gr.; guaiac., 0.08 Gm., or 1$\frac{1}{3}$ gr.

Dose, 1–2.

Pilulæ Asafœtidæ (Pills of Asafetida). Each pill contains—asafetida, 0.2 Gm., or about 3$\frac{1}{10}$ gr.; soap, 0.06 Gm., or about $\frac{9}{10}$ gr.

Dose, 1–3.

Pilulæ Catharticæ Compositæ (Compound Cathartic Pills). Each pill contains—compound extract of colocynth, 0.08 Gm., or about 1$\frac{1}{3}$ gr.; mild mercurous chloride, 0.06 Gm., or about 1 gr.; extract of jalap, 0.3 Gm., or about $\frac{1}{2}$ gr.; gamboge, 0.15 Gm., or about $\frac{1}{4}$ gr.

Dose, 1–3.

Pilulæ Catharticæ Vegetabiles (Vegetable Cathartic Pills). Each pill contains—compound extract of colocynth, 0.06 Gm., or about 1 gr.; extract of hyoscyamus, 0.03 Gm., or about $\frac{1}{2}$ gr.; extract of jalap, 0.03 Gm., or about $\frac{1}{2}$ gr.; extract of leptandra, 0.015 Gm., or about $\frac{1}{4}$ gr.; resin of podophyllum, 0.015 Gm., or about $\frac{1}{4}$ gr.; oil of peppermint, 0.008 C.c., or $\frac{1}{8}$ ♏.

Dose, 1–3.

Pilulæ Ferri Carbonatis (Pills of Carbonate of Iron—Blaud's Pills). Each pill contains about 0.06 Gm., or about 1 gr., of ferrous carbonate, made with ferrous sulphate and potassium carbonate.

Dose, 1–3.

Pilulæ Ferri Iodidi (Pills of Ferrous Iodide). Each pill contains about 0.049 Gm., or about $\frac{3}{4}$ gr., of ferrous iodide, and is coated with balsam of Tolu.

Dose, 1–3.

Pilulæ Opii (Pills of Opium). Each pill contains—powdered opium, 0.065 Gm., or 1 gr.; soap, 0.02 Gm., or $\frac{1}{8}$ gr.

Dose, 1–2.

Pilulæ Phosphori (Pills of Phosphorus). Each pill contains about 0.0006 Gm., or about $\frac{1}{100}$ gr., of phosphorus, and is coated with balsam of Tolu.

Dose, 1–2.

Pilulæ Rhei (Pills of Rhubarb). Each pill contains—rhubarb, 0.2 Gm., or about $3\frac{1}{10}$ gr.; soap, 0.06 Gm., or about $\frac{9}{10}$ gr.

Dose, 1–3.

Pilulæ Rhei Compositæ (Compound Pills of Rhubarb). Each pill contains—rhubarb, 0.13 Gm., or 2 gr.: purified aloes, 0.10 Gm., or about $1\frac{1}{2}$ gr.; myrrh, 0.06 Gm., or about $\frac{9}{10}$ gr.; oil of peppermint, .006 C.c., or about $\frac{1}{10}$ ♏.

Dose, 1–3.

Pimenta (Pimenta—Allspice). The nearly ripe fruit of *Pimenta officinalis.*

Dose, 0.065–0.65 Gm., 1–10 gr.

Oleum Pimentæ.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Piper (Pepper—Black Pepper). The nearly ripe fruit of *Piper nigrum.*

Dose, 0.32–1.3 Gm., 5–20 gr.

Oleoresina Piperis.

Dose, 0.016–0.06 C.c., ¼–1 ♏.

Piperinum (Piperin). A neutral principle obtained from pepper.

Dose, 0.032–0.32 Gm., ½–5 gr.

***Piperazinum** (Piperazin—Piperazidene, Ethylene-imine, Diethylene-diamine, Dispermine). A synthetic basic compound formed by the action of ammonia upon ethylene bromide. It is seen as a white crystalline powder.

Dose, 1.0 Gm., 15 gr., daily.

Pix Burgundica (Burgundy Pitch). The prepared resinous exudation of *Abies excelsa.* Used in the preparation of plasters.

Emplastrum Picis Burgundicæ. Used externally.

Emplastrum Picis Cantharidatum (Warming Plaster). Used externally.

Pix Liquida (Tar). An empyreumatic oleoresin obtained by destructive distillation of the wood of several species of *Pinus.*

Dose, 0.32–0.65 Gm., 5–10 gr.

Oleum Picis Liquidæ.

Dose, 0.06–0.3 C.c., 1–5 ♏. Also used locally.

Syrupus Picis Liquidæ.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Unguentum Picis Liquidæ. Used externally.

***Plumbum** (Lead).

Ceratum Plumbi Subacetatis (Goulard's Cerate). Used externally.

Emplastrum Plumbi. Used externally.

Liquor Plumbi Subacetatis. Used externally.

Liquor Plumbi Subacetatis Dilutus. Used externally.

Plumbi Acetas (Lead Acetate—Sugar of Lead). Most frequently seen as colorless plates or heavy, white, crystalline masses.

Dose, 0.065–0.19 Gm., 1–3 gr.

Plumbi Carbonas (Lead Carbonate—White Lead). A heavy white powder. Employed externally in ointment.

Plumbi Iodidum (Lead Iodide). A heavy bright-yellow powder.

Dose, 0.032–0.13 Gm., ½–2 gr.

Plumbi Nitras (Lead Nitrate). Colorless transparent crystals or white, nearly opaque, crystals. Used in solution as a disinfectant.

Plumbi Oxidum (Lead Oxide—Litharge). A heavy reddish-yellow powder. Used externally.

Unguentum Plumbi Carbonatis. Used externally.

Unguentum Plumbi Iodidi. Used externally.

Podophyllum (Podophyllum—May Apple). The rhizome and roots of *Podophyllum peltatum.*

Dose, 0.13–1.3 Gm., 2–20 gr.

Extractum Podophylli.

Dose, 0.032–0.32 Gm., ½–5 gr.

Extractum Podophylli Fluidum.

Dose, 0.12–1.2 C.c., 2–20 ♏.

**Podophyllin.*

Dose, 0.0032–0.032 Gm., $\frac{1}{20}$–½ gr.

Resina Podophylli.

Dose, 0.0032–0.032 Gm., $\frac{1}{20}$–½ gr.

***Potassium.**

Potassa (Potassa—Potassium Hydrate, Potassium Hydroxide, Caustic Potash). Dry, translucent pencils. Very deliquescent. Used pharmaceutically and as a powerful and quickly-acting caustic.

Charta Potassii Nitratis. Employed to relieve paroxysms of asthma by burning the paper and inhaling the fumes.

Liquor Potassæ.

Dose, 0.3–1.8 Gm., 5–30 ♏. Used also as a caustic.

Liquor Potassii Arsenitis.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Potassii Citratis.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Potassa cum Calce (Potassa with Lime—Vienna Caustic or Vienna Paste). A greenish-white powder. Very deliquescent. Used externally as a caustic.

Potassa Sulphurata (Sulphurated Potassa—Liver of Sulphur). Irregular pieces of a liver-brown (when fresh) or greenish-yellow color.

Dose, 0.13–0.65 Gm., 2–10 gr.

Potassii Acetas (Potassium Acetate). A white powder, or crystalline masses. Very deliquescent.

Dose, 0.65–3.9 Gm., 10–60 gr.

Potassii Bicarbonas (Potassium Bicarbonate). Large, colorless, transparent crystals.

Dose, 0.65–3.9 Gm., 10–60 gr.

Potassii Bichromas (Potassium Bichromate—Potassium Dichromate). Large, orange-red, transparent crystals.

Dose, 0.006–0.012 Gm., $\frac{1}{10}$–$\frac{1}{5}$ gr.

Potassii Bitartras (Potassium Bitartrate—Cream of Tartar). A white, gritty, crystalline powder.

Dose, 0.65–3.9 Gm., 10–60 gr.

Potassii Bromidum (Potassium Bromide). Large, white, cubical crystals. The salt is also frequently dispensed as a granular powder.

Dose, 0.32–3.9 Gm., 5–60 gr.

Potassii Carbonas (Potassium Carbonate). A white, granular, deliquescent powder.

Dose, 0.32–0.65 Gm., 5–10 gr.

Potassii Chloras (Potassium Chlorate). Either colorless plates or a white powder.

Dose, 0.13–0.65 Gm., 2–10 gr.

Potassii Citras (Potassium Citrate). Most frequently seen as a white granular powder. Very deliquescent.

Dose, 0.65–2.0 Gm., 10–31 gr.

Potassii Citras Effervescens (Effervescent Potassium Citrate). A coarse, white, granular powder.

Dose, 1.0–6.0 Gm., 15–93 gr.

Potassii Cyanidum (Potassium Cyanide). White, hard, amorphous pieces or a white granular powder. Deliquescent in moist air.

Dose, 0.0032–0.0065 Gm., $\frac{1}{20}$–$\frac{1}{10}$ gr.

Potassii et Sodii Tartras (Potassium and Sodium Tartrate —Rochelle Salt). Most frequently seen as a white powder.

Dose, 3.9–15.5 Gm., 1–4 ʒ.

Potassii Ferrocyanidum (Potassium Ferrocyanide—Yellow Prussiate of Potash). Large yellow crystals.

Dose, 0.6–1. Gm., 10–15 gr. More freely as antidote to copper.

Potassii Hypophosphis (Potassium Hypophosphite). Most frequently seen as white crystalline masses or a granular powder. Very deliquescent.

Dose, 0.6–2.0 Gm., 10–31 gr.

Potassii Iodidum (Potassium Iodide). Colorless, transparent, cubical crystals. The less pure commercial variety is in white, opaque, cubical crystals. Slightly deliquescent in moist air.

Dose, 0.32–2.0 Gm., 5–31 gr.

Potassii Nitras (Potassium Nitrate—Saltpetre). Most frequently seen as a white crystalline powder.

Dose, 0.5–1.0 Gm., 7–15 gr.

Potassii Permanganas (Potassium Permanganate). Dark-purple crystals. Explosive with organic matter.

Dose, 0.032–0.19 Gm., ½–3 gr.

Potassii Sulphas (Potassium Sulphate). Hard, colorless, transparent crystals.

Dose, 0.65–3.9 Gm., 10–60 gr.

**Potassii Sulphis* (Potassium Sulphite). Large, transparent, colorless crystals.

Dose, 0.65–3.9 Gm., 10–60 gr.

Trochisci Potassii Chloratis.

Dose, 1, two to three times daily.

Unguentum Potassæ Iodidi. Used locally.

***Protargol.** A silver proteid compound. A yellowish powder, readily soluble in water. Used locally as an antiseptic astringent, in the strength of 1 : 200 to 1 : 50. Also used internally as a substitute for silver nitrate or oxide.

Dose, 0.032–0.13 Gm., ½–2 gr.

Prunum (Prune). The fruit of *Prunus domestica.*

Dose, any quantity.

Prunus Virginiana (Wild Cherry). The bark of *Prunus serotina,* collected in autumn.

Extractum Pruni Virginianæ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Infusum Prunum Virginianæ.

Dose, 15.0–30.0 C.c., 4–8 fʒ.

Syrupus Pruni Virginianæ.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Pulsatilla (Pulsatilla). The herb of *Anemone pulsatilla* and *Anemone pratensis,* collected soon after flowering.

**Anemoninum.*

Dose, 0.01–0.032 Gm., ⅙–½ gr.

**Extractum Pulsatillæ.*

Dose, 0.032–0.065 Gm., ½–1 gr.

**Extractum Pulsatillæ Fluidum.*

Dose, 0.06–0.3 C.c., 1–5 ♏.

Pulvis Antimonialis (Antimonial Powder—James's Powder). Contains—antimony oxide, 33 per cent.; precipitated calcium phosphate, 67 per cent.

Dose, 0.19–0.65 Gm., 3–10 gr.

Pulvis Aromaticus (Aromatic Powder). Contains—Ceylon cinnamon, 35 per cent.; ginger, 35 per cent.; cardamom, 15 per cent.; nutmeg, 15 per cent.

Dose, 0.65–2.0 Gm., 10–31 gr.

Pulvis Cretæ Compositus (Compound Chalk-powder). Contains—prepared chalk, 30 per cent.; acacia, 20 per cent.; sugar, 50 per cent.

Dose, 0.32–4.0 Gm., 5–62 gr.

Pulvis Effervescens Compositus (Compound Effervescing Powder—Seidlitz Powder). Each blue powder contains—potassium and sodium tartrate, 7.75 Gm., 2 ℥; sodium bicarbonate, 2.58 Gm., 40 gr. Each white powder contains—tartaric acid, 2.25 Gm., 35 gr.

Dose, 1 set of powders.

Pulvis Glycyrrhizæ Compositus (Compound Powder of Glycyrrhiza). Contains—senna, 18 per cent.; glycyrrhiza, 23.6 per cent.; washed sulphur, 8 per cent.; oil of fennel, 0.4 per cent.; sugar, 50 per cent.

Dose, 2.0–8.0 Gm., 31–123 gr.

Pulvis Ipecacuanhæ et Opii (Powder of Ipecac and Opium—Dover's Powder). 0.64 Gm., or 10 grains, contains—powdered opium, 0.065 Gm., 1 gr.; ipecac, 0.065 Gm., 1 gr.; sugar of milk, 0.52 Gm., 8 gr.

Dose, 0.32–1.3 Gm., 5–20 gr.

Pulvis Jalapæ Compositus (Compound Powder of Jalap—Pulvis Purgans). Contains—jalap, 35 per cent.; potassium bitartrate, 65 per cent.

Dose, 1.0–2.59 Gm., 15–40 gr.

Pulvis Morphinæ Compositus (Compound Powder of Morphine—Tully's Powder). Each 0.6 Gm., 10 grains, of the powder contains about 0.01 Gm., ⅙ gr., of morphine sulphate; 0.19 Gm., 3 gr., of camphor; 0.20 Gm., 3⅓ gr., of glycyrrhiza; 0.20 Gm., 3⅓ gr., of precipitated calcium carbonate.

Dose, 0.32–0.65 Gm., 5–10 gr.

Pulvis Rhei Compositus (Compound Powder of Rhubarb). Contains—rhubarb, 25 per cent.; magnesia, 65 per cent.; ginger, 10 per cent.

Dose, 2.0–4.0 Gm., 31–62 gr.

***Pyoktanin** (Methyl Violet, Methyl Blue—Blue Pyoktanin). An aniline derivative; a blue powder. There is also a yellow pyoktanin.

Dose, 0.065–0.30 Gm., 1–5 gr. More frequently used locally in solution as an antiseptic.

Pyrethrum (Pyrethrum—Pellitory). The root of *Anacyclus Pyrethrum.*

Dose, as a masticatory, 1.9–3.9 Gm., ½–1 ʒ.

Tinctura Pyrethri. Used locally as a stimulant to mucous membrane.

Pyrogallol (Pyrogallol—Pyrogallic Acid). Light, white, shining lamellæ or fine needles, obtained chiefly by the dry distillation of gallic acid. Used externally in ointments of 5 to 10 per cent.

Pyroxylinum (Pyroxylin—Soluble Gun-cotton, Colloxylin). A nitro-cellulose made by treating absorbent cotton with a mixture of nitric and sulphuric acids. Used for making collodion.

Quassia (Quassia). The wood of *Picræna excelsa.*

Extractum Quassiæ.

Dose, 0.065–0.195 Gm., 1–3 gr.

Extractum Quassiæ Fluidum.

Dose, 0.3–0.6 C.c., 5–10 ♏.

**Infusum Quassiæ.*

Dose, 236.5–473.0 C.c., ½–1 O, injected into rectum for removal of thread-worms.

Tinctura Quassiæ.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Quercus Alba (White Oak). The bark of *Quercus alba.*

Dose, 0.32–2.0 Gm., 5–31 gr., in infusion.

Quillaja (Quillaja—Quillaia, Pharm. 1880; Soap-bark). The inner bark of *Quillaja Saponaria.*

Tinctura Quillajæ. Used externally.

Quinidinæ Sulphas (Quinidine Sulphate). The sulphate of an alkaloid from cinchona.

Dose, 0.32–1.0 Gm., 5–15 gr., or more.

Quinina (Quinine). The main alkaloid of cinchona.

Dose, 0.13–0.5 Gm., 2–7 gr., or more.

Ferri et Quininæ Citras.

Dose, 0.32–0.65 Gm., 5–10 gr.

Ferri et Quininæ Citras Solubilis.

Dose, 0.32–0.65 Gm., 5–10 gr.

Quininæ Bisulphas (Quinine Bisulphate).

Dose, 0.065–1.0 Gm., 1–15 gr., or more.

Quininæ Hydrobromas (Quinine Hydrobromate).

Dose, 0.065–1.0 Gm., 1–15 gr., or more.

Quininæ Hydrochloras (Quinine Hydrochlorate).

Dose, 0.065–1.0 Gm., 1–15 gr., or more.

**Quininæ Hydrochloras Carbamidata* (Carbamide Hydrochlorate of Quinine—Muriate of Quinine and Urea).

Dose, 0.065–1.0 Gm., 1–15 gr., or more.

Quininæ Sulphas (Quinine Sulphate).
Dose, 0.065–0.65 Gm., 1–10 gr., or more.

**Quininæ Tannas* (Quinine Tannate).
Dose, 0.065–1.3 Gm., 1–20 gr., or more.

Quininæ Valerianas (Quinine Valerianate).
Dose, 0.065–0.65 Gm., 1–10 gr., or more.

**Euchinine* (Ethyl-carbonic-ester of quinine—Tasteless Quinine).
Dose, 0.13–1.0 Gm., 2–15 gr.

Syrupus Ferri, Quininæ et Strychninæ Phosphatum.
Dose, 3.7–7.5 C.c., 1–2 fʒ.

Resina (Resin—Colophony). A transparent, amber-colored resin obtained from turpentine.
Dose, 0.065–0.32 Gm., 1–5 gr.

Resina Copaibæ (Resin of Copaiba). A yellowish brittle resin obtained from copaiba.
Dose, 0.65–1.3 Gm., 10–20 gr.

Resina Jalapæ (Resin of Jalap). Yellowish-brown fragments or a yellowish-gray or yellowish-brown resinous powder.
Dose, 0.13–0.24 Gm., 2–4 gr.

Resina Podophylli (Resin of Podophyllum—Podophyllin). A yellowish-green or grayish-white amorphous powder.
Dose, 0.003–0.032 Gm., $\frac{1}{20}$–$\frac{1}{2}$ gr.

Resina Scammonii (Resin of Scammony). Yellowish-brown fragments or a yellowish-white powder.
Dose, 0.13–0.52 Gm., 2–8 gr.

Resorcinum (Resorcin—Resorcinol, Meta-dioxy-benzol). A diatomic phenol, consisting of faintly reddish needle-shaped crystals or rhombic plates.
Dose, 0.065–0.65 Gm., 1–10 gr. Also used locally in solutions or ointments of 2 to 5 per cent.

Rhamnus Purshiana (Cascara Sagrada—Chittern Bark, Sacred Bark). The bark of *Rhamnus Purshiana.*
**Extractum Rhamni Purshianæ.*
Dose, 0.065–0.5 Gm., 1–7 gr.
Extractum Rhamni Purshianæ Fluidum.
Dose, 1.0–1.8 Gm., 16–30 ♏.

Rheum (Rhubarb). The root of *Rheum officinale.*
Dose, 0.65–1.9 Gm., 10–30 gr.
Extractum Rhei.
Dose, 0.32–0.65 Gm., 5–10 gr.
Extractum Rhei Fluidum.
Dose, 0.6–1.8 Gm., 10–30 ♏.
Mistura Rhei et Sodæ.
Dose, 1.8–7.5 C.c., ½–2 fʒ.
Pilulæ Rhei.
Dose, 1–3.
Pilulæ Rhei Compositus.
Dose, 1–3.
Pulvis Rhei Compositus.
Dose, 2.0–4.0 Gm., 31–62 gr.
Syrupus Rhei.
Dose, 1.8–15.0 C.c., ½–4 fʒ.
Syrupus Rhei Aromaticus.
Dose, 1.8–15.0 C.c., ½–4 fʒ.
Tinctura Rhei.
Dose, 3.7–7.5 C.c., 1–2 fʒ.
Tinctura Rhei Aromatica.
Dose, 1.8–3.7 C.c., ½–1 fʒ.
Tinctura Rhei Dulcis.
Dose, 3.75–7.5 C.c., 1–2 fʒ.

Rhus Glabra (Rhus Glabra). The fruit of *Rhus glabra.*
Extractum Rhois Glabra Fluidum.
Dose, 0.6–1.8 C.c., 10–30 ♏. Used mostly, diluted, as a gargle.

Rhus Toxicodendron (Rhus Toxicodendron—Poison Ivy). The fresh leaves of *Rhus radicans.*

Dose, 0.032–0.32 Gm., ½–5 gr.

**Extractum Rhois Toxicodendronis Fluidum.*

Dose, 0.03–0.3 C.c., ½–5 ♏.

Rosa Centifolia (Pale Rose). The petals of *Rosa centifolia.*

Aqua Rosæ.

Dose, 3.7–30.0 C.c., 1–8 fʒ.

Aqua Rosæ Fortior.

Dose, 1.8–15.0 C.c., ½–4 fʒ.

Oleum Rosæ. Perfume.

Unguentum Aquæ Rosæ. Ointment-base.

Rosa Gallica (Red Rose). The petals of *Rosa gallica.*

Confectio Rosæ. Used as an excipient.

Extractum Rosæ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Mel Rosæ.

Dose, 3.5–7.5 C.c., 1–2 fʒ.

Syrupus Rosæ.

Dose, any quantity.

***Rosmarinus** (Rosemary). Leaves of *Rosmarinus officinalis.*

Oleum Rosmarini.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Rubus (Rubus—Blackberry). The bark of the root of *Rubus villosus*, *Rubus canadensis*, and *Rubus trivialis.*

Dose, 1.9–3.9 Gm., ½–1 ʒ, in decoction.

Extractum Rubi Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Syrupus Rubi.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Rubus Idæus (Raspberry). The fruit of *Rubus Idæus.*

Syrupus Rubi Idæi.

Dose, any quantity.

Rumex (Rumex—Yellow Dock). The root of ***Rumex** crispus* and of some other species of ***Rumex.***

Extractum Rumicis Fluidum.

Dose, 1.8–3.7 C.c., ½–1 f℥.

Sabina (Savine). The tops of *Juniperus Sabina.*

Dose, 0.3–1.0 Gm., 5–15 gr.

Extractum Sabinæ Fluidum.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Oleum Sabinæ.

Dose, 0.3–0.6 C.c., 5–10 ♏.

***Saccharinum** (Saccharin—Glusidum). A very sweet, whitish, crystalline powder. This substance has been administered in quantities of 0.065–0.65 Gm., 1–10 gr.

Saccharum (Sugar—Cane-sugar). Refined cane- or beet-sugar.

Dose, any quantity.

Saccharum Lactis (Sugar of Milk). A crystalline sugar obtained from the whey of cow's milk. Used to make triturates and other small powders.

Dose, any quantity.

Salicinum (Salicin). The neutral principle obtained from several species of *Salix* and *Populus.*

Dose, 0.65–7.8 Gm., 10 gr.–2 ʒ.

***Salipyrina** (Salipyrine—Antipyrine Salicylate). A white crystalline powder.

Dose, 0.32–1.9 Gm., 5–30 gr.

Salol (Salol—Phenyl Salicylate, Salicylate of Phenol). The salicylic ether of phenol, consisting of a white crystalline powder.

Dose, 0.32–2.0 Gm., 5–31 gr.

***Salophen** (Acetyl-para-amido-phenol-salicylate). A white powder made up of small white scales.

Dose, 0.32–2.0 Gm., 5–31 gr.

Salvia (Salvia—Sage). The leaves of *Salvia officinalis*.

Dose, 15.0–30.0 Gm., ½–1 ℥, in infusion.

Sambucus (Sambucus—Elder-flowers). The flowers of *Sambucus canadensis*.

Dose, 1.9–3.9 Gm., ½–1 ʒ, in infusion.

Sanguinaria (Sanguinaria—Blood-root). The rhizome of *Sanguinaria canadensis*.

Extractum Sanguinariæ Fluidum.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Tinctura Sanguinariæ.

Dose, 0.3–1.8 C.c., 5–30 ♏.

***Santalum Album** (White Sandalwood). The wood of *Santalum Yasi* and several other species yielding white sandalwood.

Oleum Santali.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Santalum Rubrum (Red Saunders). The wood of *Pterocarpus santalinus*. Used only as a coloring agent. The color is not given up to aqueous liquids.

Santonica (Santonica—Levant Wormseed). The unexpanded flower-heads of *Artemisia pauciflora*.

Dose, 0.65–3.9 Gm., 10–60 gr.

Santoninum (Santonin). A crystalline glucoside obtained from santonica.

Dose, 0.032–0.13 Gm., ½–2 gr.

Trochisci Santonini.

Dose, 1 or 2, night and morning.

Sapo (Soap—White Castile). Formed by mixing soda and olive oil.

Emplastrum Saponis. Used externally.

Linimentum Saponis. Used externally.

Sapo Mollis (Soft Soap—Sapo Viridis, U. S. P. 1880; Green Soap). Made from linseed oil, potassa, alcohol, and water. Used externally.

Linimentum Saponis Mollis Tinct. Saponis Viridis, U. S. P. (1880). Used externally.

Sarsaparilla Sarsaparilla. The root of smilax.

Decoctum Sarsaparillæ Compositum.

Dose, 118.0–177.0 C.c., 4–6 f℥.

Extractum Sarsaparillæ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Extractum Sarsaparillæ Fluidum Compositum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Syrupus Sarsaparillæ Compositus.

Dose, any quantity. Used as vehicle.

Sassafras (Sassafras). The bark of the root of *Sassafras variifolium.*

Dose, 3.9–15.0 Gm., 1–4 ʒ, in infusion.

Sassafras Medulla (Sassafras-pith). The pith of the same tree.

Mucilago Sassafras Medullæ.

Dose, 3.7–15.0 C.c., 1–4 fʒ, or more.

Scammonium (Scammony). A resinous exudate from the root of *Convolvulus Scammonia.*

Dose, 0.13–0.65 Gm., 2–10 gr.

Resina Scammonii.

Dose, 0.065–0.5 Gm., 1–8 gr.

Extractum Colocynthidis Compositus.

Dose, 0.32–1.3 Gm., 5–20 gr., as purge.

Scilla (Squill). The bulb of *Urginea maritima* deprived of its dry outer scales and cut into thin slices.

Dose, 0.065–0.32 Gm., 1–5 gr.

Acetum Scillæ.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Extractum Scillæ Fluidum.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Syrupus Scillæ.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Syrupus Scillæ Compositus.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Tinctura Scillæ.

Dose, 0.6–1.2 C.c., 10–20 ♏.

Scoparius (Scoparius—Broom). The tops of *Cytisus Scoparius.*

Dose, 0.32–1.3 Gm., 5–20 gr., in infusion.

Extractum Scoparii Fluidum.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Sparteinæ Sulphas.

Dose, 0.0032–0.032 Gm., $\frac{1}{20}$–½ gr.

Scutellaria (Scutellaria—Skull-cap). The herb of *Scutellaria lateriflora.*

Dose, 1.9–3.75 C.c., ½–1 ʒ, in infusion.

Extractum Scutellariæ Fluidum.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Senega (Senega). The root of *Polygala Senega.*

Extractum Senegæ Fluidum.

Dose, 0.6–1.2 C.c., 10–20 ♏.

Syrupus Senegæ.

Dose, 1.8–7.50 C.c., ½–2 fʒ.

Syrupus Scillæ Compositus. Contains 8 per cent. of fluid extract of senega.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Senna (Senna). The leaflets of *Cassia acutifolia* and of *Cassia angustifolia.*

Dose, 1.8–7.8 Gm., ½–2 ʒ, in powder.

Confectio Sennæ.

Dose, 7.8 Gm., 2 ʒ.

Extractum Sennæ Fluidum.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Infusum Sennæ Compositum.

Dose, 60.0–240.0 C.c., 2–8 f℥.

Pulvis Glycyrrhizæ Compositum. Contains 18 per cent. of powdered senna.

Dose, 2.0–8.0 Gm., 31–123 gr.

Syrupus Sennæ.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Serpentaria (Serpentaria—Virginia Snakeroot). The rhizomes and roots of *Aristolochia serpentaria* and of *Aristolochia reticulata.*

Extractum Serpentariæ Fluidum.

Dose, 0.6–1.9 C.c., 10–30 ♏.

Tinctura Serpentariæ.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Sevum (Suet—Mutton Suet). The internal fat of the abdomen of sheep, purified by melting and straining. Used locally.

Sinapis Alba (White Mustard). The seed of *Brassica alba.*

Sinapis Nigra (Black Mustard). The ground seed of *Brassica nigra.*

Dose, 3.9–15. C.c., 1–4 ʒ, as emetic.

Charta Sinapis. Rubefacient and epispastic.

Linimentum Sinapis. Rubefacient and epispastic.

Oleum Sinapis Volatile. Epispastic.

***Sodium.**

Liquor Sodæ.

Dose, 0.3–1.8 Gm., 5–30 ♏.

Liquor Sodii Arsenatis.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Liquor Sodæ Chloratæ.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Liquor Sodii Silicatis. Used as a fixed dressing.

Mistura Rhei et Sodæ.

Dose, 3.7–7.5 Gm., 1–2 fʒ.

Soda (Soda—Caustic Soda). Translucent pencils or fused masses. Used as a powerful caustic.

Sodii Acetas (Sodium Acetate). Most frequently seen as a white, granular, crystalline powder.

Dose, 0.65–2.6 Gm., 10–40 gr.

Sodii Arsenas (Sodium Arsenate). A white crystalline powder or colorless, monoclinic prisms.

Dose, 0.0022–0.0064 Gm., $\frac{1}{30}$–$\frac{1}{10}$ gr.

Sodii Benzoas (Sodium Benzoate). A white amorphous powder.

Dose, 0.65–1.9 Gm., 10–30 gr.

Sodii Bicarbonas (Sodium Bicarbonate). A white, somewhat gritty powder.

Dose, 0.32–1.9 Gm., 5–30 gr.

Sodii Bisulphis (Sodium Bisulphite). A white, granular powder or opaque, prismatic crystals.

Dose, 0.32–1.3 Gm., 5–20 gr.

Sodii Boras (Sodium Borate—Borax). A white powder or colorless, transparent, prismatic crystals.

Dose, 0.32–1.0 Gm., 5–15 gr.

Sodii Bromidum (Sodium Bromide). A white granular powder or white cubical crystals. Attracts moisture if exposed to the air.

Dose, 0.32–3.9 Gm., 5–60 gr.

**Sodii Cacodylas* (Sodium Cacodylate). An organic salt of arsenic occurring in the form of white amorphous powder, freely soluble in water.

Dose, 0.02–0.10 Gm., $\frac{1}{3}$–$1\frac{1}{2}$ gr.

Sodii Carbonas (Sodium Carbonate). Large colorless crystals efflorescing in air.

Dose, 0.32–0.65 Gm., 5–10 gr.

Sodii Carbonas Exsiccatus (Dried Sodium Carbonate). A white powder.

Dose, 0.13–0.32 Gm., 2–5 gr.

Sodii Telluras (Sodium Tellurate).

Dose, 0.25–0.32 Gm., 4–5 gr. daily, for four to five days.

Sodii Chloras (Sodium Chlorate). A white crystalline powder or colorless, transparent crystals. Explosive if triturated with organic matter.

Dose, 0.13–0.65 Gm., 2–10 gr.

Sodii Chloridum (Sodium Chloride—Salt). A white, granular, crystalline powder or transparent, cubical crystals.

Dose, 15.0–30.0 Gm., ½–1 ℥, as emetic.

**Sodii Ethylas* (Sodium Ethylate). A white powder decomposed by water. Dissolved in absolute alcohol, it is used to remove superfluous hairs.

Sodii Hypophosphis (Sodium Hypophosphite). A white granular powder or transparent, pearly plates. Very deliquescent.

Dose, 0.32–0.65 Gm., 5–10 gr.

Sodii Hyposulphis (Sodium Hyposulphite). Large, colorless, transparent crystals.

Dose, 1.0–2.0 Gm., 15–31 gr.

Sodii Iodidum (Sodium Iodide). White cubical crystals or white crystalline powder. Deliquescent in moist air.

Dose, 0.32–2.0 Gm., 5–31 gr.

Sodii Nitras (Sodium Nitrate). Large, colorless, transparent crystals. Deliquescent in moist air.

Dose, 1.0–2.0 Gm., 15–31 gr.

Sodii Nitris (Sodium Nitrite). White fused masses or pencils. Deliquescent upon exposure to air.

Dose, 0.065–0.13 Gm., 1–2 gr.

Sodii Phosphas (Sodium Phosphate). Large colorless crystals or granular white powder. Efflorescent upon exposure to air.

Dose, 2.0–8.0 Gm., 31–124 gr.

Sodii Pyrophosphas (Sodium Pyrophosphate). A white crystalline powder or transparent, colorless crystals.

Dose, 1.0–6.5 Gm., 15–100 gr.

Sodii Salicylas (Sodium Salicylate). A white amorphous powder.

Dose, 0.65–2.0 Gm., 10–31 gr.

Sodii Sulphas (Sodium Sulphate—Glauber's Salt). Large transparent crystals or granular crystalline powder.

Dose, 3.9–31 Gm., 1 ʒ–1 ℥.

Sodii Sulphis (Sodium Sulphite). Colorless, transparent crystals. Efflorescent in air.

Dose, 0.65–3.9 Gm., 10–60 gr.

Sodii Sulphocarbolas (Sodium Sulphocarbolas). Colorless, transparent crystals.

Dose, 0.13–0.65 Gm., 2–10 gr.

Syrupus Hypophosphitum.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Trochisci Sodii Bicarbonas.

Dose, 1–2.

***Somnal** (Ethylated Choral-urethane). A clear, colorless liquid, soluble in water and alcohol.

Dose, 1.2–2.5 C.c., 20–40 ♏.

***Sozoiodol** (Di-iod-paraphenol-sulphonic Acid). Acicular crystals. Used locally as an antiseptic in the form of powder and in ointments.

Sodii Sozoidolas. Used locally as an antiseptic in aqueous solutions.

Sparteinæ Sulphas (Sparteine Sulphate). The sulphate of an alkaloid obtained from scoparius.

Dose, 0.0032–0.032 Gm., $\frac{1}{20}$–$\frac{1}{2}$ gr.

Spigelia (Spigelia—Pinkroot). The rhizome and roots of *Spigelia marilandica.*

Dose, 3.9–7.8 Gm., 1–2 ʒ, in infusion.

Extractum Spigeliæ Fluidum.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Spiritus Ætheris (Spirit of Ether). Contains 32.5 per cent. by volume of ether and 67.5 per cent. by volume of alcohol.

Dose, 3.7–11.0 C.c., 1–3 fʒ.

Spiritus Ætheris Compositus (Compound Spirit of Ether—Hoffmann's Anodyne). Contains 32.5 per cent. by volume of ether, 2.5 per cent. by volume of ethereal oil, and 65 per cent. by volume of alcohol.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Spiritus Ætheris Nitrosi (Spirit of Nitrous Ether—Sweet Spirit of Nitre). Contains about 4 per cent. by weight of ethyl nitrite and about 96 per cent. of alcohol.

Dose, 0.6–3.7 C.c., 10 ♏–1 fʒ.

Spiritus Ammoniæ (Spirit of Ammonia). Contains about 10 per cent. by weight of ammonia gas and 90 per cent. by weight of alcohol.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Spiritus Ammoniæ Aromaticus (Aromatic Spirit of Ammonia). Each 100 C.c. contains—ammonium carbonate, 3.4 Gm.; ammonia-water, 9.0 C.c.; oil of lemon, 0.1 C.c.; oil of lavender-flowers, 0.1 C.c.; oil of nutmeg, 0.1 C.c.; alcohol, 70.0 C.c.; distilled water, to make 100 C.c.

Dose, 0.6–3.7 C.c., 10 ♏–1 fʒ.

Spiritus Amygdalæ Amaræ (Spirit of Bitter Almond—Essence of Bitter Almond). Each 100 C.c. contains—1.0 C.c. of oil of bitter almond, 80 C.c. of alcohol, and distilled water a sufficient quantity to make 100 C.c.

Dose, 0.18–0.6 C.c., 3–10 ♏.

Spiritus Anisi (Spirit of Anise). Contains 10 per cent. by volume of oil of anise and 90 per cent. by volume of deodorized alcohol.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Spiritus Aurantii (Spirit of Orange). Contains 5 per cent. by volume of oil of orange-peel and 95 per cent. by volume of deodorized alcohol. Used for flavoring purposes.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Spiritus Aurantii Compositus (Compound Spirit of Orange). Each 100 C.c. contains—oil of orange-peel, 20 C.c.; oil of lemon, 5 C.c.; oil of coriander, 2 C.c.; oil of anise, 0.5 C.c.; alcohol, to make 100 C.c. Used for flavoring purposes.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Spiritus Camphoræ (Spirit of Camphor). Contains 10 Gm. of camphor, alcohol to make 100 C.c.

Dose, 0.3–1.8 C.c., 5–30 ♏.

Spiritus Chloroformi (Spirit of Chloroform). Contains 6 C.c. of chloroform, alcohol to make 100 C.c.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Spiritus Cinnamomi (Spirit of Cinnamon). Contains 10 C.c. of oil of cinnamon, alcohol to make 100 C.c.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Spiritus Frumenti (Whiskey). Contains 50 to 58 per cent. by volume or 44 to 50 per cent. by weight of alcohol. Should be at least two years old.

Dose, use as required.

Spiritus Gaultheriæ (Spirit of Gaultheria). Contains 5 C.c. of oil of gaultheria, alcohol to make 100 C.c.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Spiritus Glonoini (Spirit of Glonoin—Spirit of Nitroglycerin). Contains 1 per cent. by weight of nitro-glycerin in alcohol. Each 0.06 C.c., 1 ♏, is equivalent to about 0.0006 Gm., $\frac{1}{100}$ gr., of nitro-glycerin.

Dose, 0.06 C.c., 1 ♏, and increased rapidly with caution until effects are manifested.

Spiritus Juniperi (Spirit of Juniper). Contains about 5 C.c. of oil of juniper, alcohol to make 100 C.c.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Spiritus Juniperi Compositus (Compound Spirit of Juniper). Contains oil of juniper, 0.4 C.c.; oil of caraway, 0.05 C.c.; oil of fennel, 0.05 C.c.; alcohol, 70.0 C.c.; water, to make 100 C.c.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Spiritus Lavandulæ (Spirit of Lavender). Contains 5 C.c. of oil of lavender-flowers, deodorized alcohol to make 100 C.c.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Spiritus Limonis (Spirit of Lemon—Essence of Lemon). Contains 5 C.c. of oil of lemon, 5 Gm. of lemon-peel, deodorized alcohol to make 100 C.c. Used as a flavoring agent.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Spiritus Menthæ Piperitæ (Spirit of Peppermint—Essence of Peppermint). Contains 10 C.c. of oil of peppermint, 1 Gm. of peppermint, and alcohol sufficient to make 100 C.c.

Dose, 0.6–1.2 C.c., 10–20 ♏.

Spiritus Menthæ Viridis (Spirit of Spearmint—Essence of Spearmint). Contains 10 C.c. of oil of spearmint, 1 Gm. of spearmint, and alcohol to make 100 C.c. Used in manufactures.

Dose, 1.2–2.5 C.c., 20–40 ♏.

Spiritus Myrciæ (Bay Rum). Used locally.

Spiritus Myristicæ (Spirit of Nutmeg—Essence of Nutmeg). Contains 5 C.c. of oil of myristica, alcohol to make 100 C.c.

Dose, 0.6–1.2 C.c., 10–20 ♏.

Spiritus Phosphori (Spirit of Phosphorus—Tincture of Phosphorus). Contains phosphorus, 0.12 Gm.; absolute alcohol, to make 100 C.c. Each 7 minims represents about $\frac{1}{100}$ gr. of phosphorus.

Dose, 0.5–1.0 C.c., 8–16 ♏.

Spiritus Vini Gallici (Brandy). An alcoholic liquid obtained by distillation of the fermented juice of grapes, and at least four years old. Contains 46 to 55 per cent. by volume or 39 to 47 per cent. by weight of alcohol.

Dose, use as is required.

Staphisagria (Staphisagria—Stavesacre). The seed of *Delphinium Staphisagria.*

Dose, 0.065 Gm., 1 gr.

Stillingia (Stillingia—Queen's Root). The root of *Stillingia sylvatica.*

Dose, 0.65–3.9 Gm., 10–60 gr., in decoction.

Extractum Stillingiæ Fluidum.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Stramonii Folia (Stramonium-leaves). The leaves of *Datura Stramonium.*

Stramonii Semen (Stramonium-seed). The seed of *Datura Stramonium.*

**Daturinæ.*

Dose, 0.0005–0.001 Gm., $\frac{1}{120}$–$\frac{1}{60}$ gr.

Extractum Stramonii Seminis.

Dose, 0.01–0.032 Gm., $\frac{1}{6}$–$\frac{1}{2}$ gr.

Extractum Stramonii Seminis Fluidum.

Dose, 0.06–0.12 C.c., 1–2 ♏.

Tinctura Stramonii Seminis.

Dose, 0.6–1.2 C.c., 10–20 ♏.

***Strontium.**

Strontii Bromidum (Strontium Bromide). Colorless, transparent crystals. Very deliquescent.

Dose, 0.32–1.9 Gm., 5–30 gr.

Strontii Iodidum (Strontium Iodide). Colorless, transparent plates. Becomes yellowish and deliquescent upon exposure to air.

Dose, 0.32–2.0 Gm., 5–31 gr., or more.

Strontii Lactas (Strontium Lactate). A white, granular powder, permanent in air.

Dose, 0.65–1.9 Gm., 10–30 gr.

Strophanthus (Strophanthus). The seed of *Strophanthus hispidus.*

**Strophanthium* (Strophanthin).

Dose, 0.0006–0.0013 Gm., $\frac{1}{100}$–$\frac{1}{50}$ gr.

Tinctura Strophanthi.

Dose, 0.18–0.5 C.c., 3–8 ♏.

Strychnina (Strychnine). An alkaloid obtained from Nux vomica.

Dose, 0.001–0.0016 Gm., $\frac{1}{60}$–$\frac{1}{40}$ gr.

Ferri et Strychninæ Citras.

Dose, 0.13–0.19 Gm., 2–3 gr.

Syrupus Ferri, Quininæ et Strychninæ Phosphatum.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Strychninæ Sulphas (Strychnine Sulphate).

Dose, 0.001–0.003 Gm., $\frac{1}{60}$–$\frac{1}{20}$ gr.

***Stypticin** (Cotarnin Hydrochloride). A soluble crystalline substance made by the oxidation of narcotine.

Dose, 0.1–0.25 Gm., 1½–4 gr.

Styrax (Storax). A balsam prepared from the inner bark of *Liquidambar orientalis.*

Dose, 0.65–1.3 Gm., 10–20 gr.

***Sulphonal** (Diethyl-sulphon-dimethyl-methane). A white crystalline powder.

Dose, 0.65–2.6 Gm., 10–40 gr.

Sulphur.

Calx Sulphurata.

Dose, 0.006–0.013 Gm., ⅒–⅕ gr.

Potassæ Sulphurata.

Dose, 0.13–0.65 Gm., 2–10 gr.

Pulvis Glycyrrhizæ Compositum.

Dose, 2.0–8.0 Gm., 31–123 gr.

Sulphuris Iodidum (Sulphur Iodide). Dark-yellowish, brittle masses.

Dose, 0.016–0.065 Gm., ¼–1 gr.

Sulphur Lotum (Washed Sulphur). A fine yellow powder.

Dose, 3.9–7.8 Gm., 1–2 ʒ.

Sulphur Præcipitatum (Precipitated Sulphur). A fine, pale-yellow powder.

Dose, 3.9–7.8 Gm., 1–2 ʒ.

Sulphur Sublimatum (Sublimed Sulphur). A fine yellow powder.

Dose, 3.9–7.8 Gm., 1–2 ʒ.

Unguentum Sulphuris. Used externally.

Sumbul (Sumbul). The root of *Ferula Sumbul.*

Dose, 1.9–3.9 Gm., ½–1 ʒ, in infusion.

Tinctura Sumbul.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Suppositoria Glycerini (Suppositories of Glycerin). Each suppository contains 6.0 Gm., 93 gr., of glycerin.

Dose, one into rectum, as required.

***Suprarenal Gland.** The desiccated suprarenal gland of sheep.

Dose, 0.32–0.6 Gm., 5–10 gr.

Syrupus (Syrup).

Dose, any quantity.

Syrupus Acaciæ (Syrup of Acacia). Contains 25 per cent by volume of mucilage of acacia.

Dose, any quantity.

Syrupus Acidi Citrici (Syrup of Citric Acid). Contain about 1 per cent. of citric acid and 1 per cent. of spiri of lemon.

Dose, any quantity.

Syrupus Acidi Hydriodici (Syrup of Hydriodic Acid) Contains about 1 per cent. by weight of absolut hydriodic acid.

Dose, 1.8–15.0 C.c., ½–4 fʒ.

Syrupus Allii (Syrup of Garlic). About 20 per cent. o garlic is used in making this syrup. The syrup i acid in reaction.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Syrupus Althææ (Syrup of Althæa). About 5 per cent of althæa is used in making this syrup.

Dose, any quantity.

Syrupus Amygdalæ (Syrup of Almond). About 14 pe cent. of sweet almond and 4 per cent. of bitter almon are used in making this syrup.

Dose, 3.5–7.5 C.c., 1–2 fʒ.

Syrupus Aurantii (Syrup of Orange). About 5 per cent of sweet orange-peel is used in making this syrup

Dose, any quantity.

Syrupus Aurantii Florum (Syrup of Orange-flowers). Mad by dissolving sugar in orange-flower water withou heat.

Dose, any quantity.

Syrupus Calcii Lactophosphatis (Syrup of Calcium Lactophosphate). Each teaspoonful, 3.7 C.c., contains about 1½ gr., 0.097 Gm., of calcium phosphate.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Syrupus Calcis (Syrup of Lime). About 6.5 per cent. of lime is employed in making this syrup.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Syrupus Ferri Iodidi (Syrup of Ferrous Iodide). Contains about 10 per cent. by weight of ferrous iodide.

Dose, 0.3–2.0 C.c., 5–32 ♏.

Syrupus Ferri, Quininæ et Strychninæ Phosphatum (Syrup of the Phosphates of Iron, Quinine, and Strychnine). Each teaspoonful, or 3.7 C.c., contains about 1⅛ gr., 0.067 Gm., of soluble ferric phosphate, 1⅔ gr., 0.108 Gm., of quinine sulphate, and 1/85 gr., 0.00076 Gm., of strychnine.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Syrupus Hypophosphitum (Syrup of Hypophosphites). Each teaspoonful, or 3.7 C.c., contains about 2.7 gr., 0.175 Gm., of calcium hypophosphite and 0.9 gr., 0.061 Gm., each of potassium hypophosphite and sodium hypophosphite.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Syrupus Hypophosphitum cum Ferro (Syrup of Hypophosphites with Iron). Each teaspoonful, or 3.7 C.c., contains the same as the above, with the addition of ½ gr., or 0.032 Gm., each, of ferrous lactate and potassium citrate.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Syrupus Ipecacuanhæ (Syrup of Ipecac). Contains 7 per cent. by volume of fluid extract of ipecac and 1 per cent. by volume of acetic acid.

Dose, 1.8–3.7 C.c., ½–1 fʒ, as expectorant; 3.7–15.0 C.c., 1–4 fʒ, as emetic for child.

Syrupus Krameriæ (Syrup of Krameria). Contains about 45 per cent. by volume of fluid extract of krameria.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Syrupus Lactucarii (Syrup of Lactucarium). Contains 10 per cent. by volume of tincture of lactucarium.

Dose, 3.7–11.2 C.c., 1–3 fʒ.

Syrupus Picis Liquidæ (Syrup of Tar). About 7.5 per cent. of tar is used in making this syrup.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Syrupus Pruni Virginianæ (Syrup of Wild Cherry). About 15 per cent. of wild cherry is used in making this syrup.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Syrupus Rhei (Syrup of Rhubarb). Contains about 10 per cent. of fluid extract of rhubarb, 0.4 per cent. of spirit of cinnamon, 1 per cent. of potassium carbonate, and 5 per cent. of glycerin.

Dose, 1.8–15.0 C.c., ½–4 fʒ.

Syrupus Rhei Aromaticus (Aromatic Syrup of Rhubarb). Contains about 15 per cent. of aromatic tincture of rhubarb.

Dose, 1.8–15.0 C.c., ½–4 fʒ.

Syrupus Rosæ (Syrup of Rose). Contains about 12.5 per cent. by volume of fluid extract of rose.

Dose, any quantity.

Syrupus Rubi (Syrup of Rubus). Contains about 25 per cent. by volume of fluid extract of rubus added to syrup.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Syrupus Rubi Idæi (Syrup of Raspberry). Made by dissolving 60 parts of sugar in 40 parts of the juice of fresh, ripe raspberries.

Dose, any quantity.

Syrupus Sarsaparillæ Compositus (Compound Syrup of Sarsaparilla). Contains about 20 per cent. by volume of fluid extract of sarsaparilla, 1.5 per cent. of fluid extract of senna, 1.5 per cent. of fluid extract of glycyrrhiza, and flavored with oils of sassafras, anise, and gaultheria.

Dose, any quantity.

Syrupus Scillæ (Syrup of Squill). Contains about 45 per cent. by volume of vinegar of squill.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Syrupus Scillæ Compositus (Compound Syrup of Squill—Coxe's Hive Syrup). Each teaspoonful, or 3.7 C.c., contains about 5 ♏, or 0.3 C.c., each, of fluid extract of squill and senega, and a little less than ⅛ gr., or 0.008 Gm., of antimony and potassium tartrate.

Dose, 0.6–3.7 C.c., 10–60 ♏.

Syrupus Senegæ (Syrup of Senega). Contains about 20 per cent. by volume of fluid extract of senega and 0.5 per cent. by volume of ammonia-water.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Syrupus Sennæ (Syrup of Senna). About 25 per cent. of senna is used in making this syrup. It is flavored with oil of coriander.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Syrupus Tolutanus (Syrup of Tolu). About 1 per cent. of balsam of Tolu is used in making this syrup.

Dose, any quantity.

Syrupus Zingiberis (Syrup of Ginger). About 3 per cent. by volume of fluid extract of ginger is used in making this syrup.

Dose, any quantity.

Tabacum (Tobacco). The commercial dried leaves of *Nicotiana Tabacum.*

Dose, 0.32–0.38 Gm., 5–6 gr., as emetic.

Tamarindus (Tamarind). The preserved pulp of the fruit of *Tamarindus indica.*

Dose, 3.9–31.1 Gm., 1 ʒ–1 ℥.

Confectio Sennæ. Contains 10 per cent. of tamarind.
Dose, 7.8 Gm., 2 ʒ.

Tanacetum (Tansy). The leaves and tops of *Tanacetum vulgare.*
Dose, 7.5–15.5 Gm.; 2–4 ʒ, in infusion.
**Oleum Tanacetum.*
Dose, 0.3–0.6 C.c., 5–10 ♏.

***Tannalbin.** A grayish-brown powder made by the action of tannic acid upon albumin.
Dose, 0.32–0.6 Gm., 5–10 gr.

***Tannigen.** A yellowish-gray, odorless, almost tasteless, hygroscopic powder, made by the action of glacial acetic acid upon tannic acid.
Dose, 0.5–1.0 Gm., 8–15 gr.

***Tannopin** (Tannone). A chocolate colored, tasteless, almost insoluble, hygroscopic powder, made by a combination between tannin and urotropin.
Dose, 0.5–1.0 Gm., 8–15 gr.

Taraxacum (Taraxacum—Dandelion). The root of *Taraxacum officinale.*
Extractum Taraxaci.
Dose, 0.32–1.9 Gm., 5–30 gr.
Extractum Taraxaci Fluidum.
Dose, 3.7–7.5 C.c., 1–2 fʒ.

***Tetanus Antitoxin** (Antitetanic Serum). Used hypodermically.
Dose, 10.0–30.0 C.c., 2½–8 fʒ.

Terebenum (Terebene). A liquid hydrocarbon made by oxidizing oil of turpentine by strong sulphuric acid.
Dose, 0.3–0.6 C., 5–10 ♏.

Terebinthina (Turpentine). A concrete oleoresin from the *Pinus palustris* and from other species of *Pinus.*
Dose, 0.13–0.65 Gm., 2–10 gr.
Linimentum Terebinthinæ. Used locally.

Oleum Terebinthinæ. Used locally.

Oleum Terebinthinæ Rectificatum.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Resina Terebinthinæ.

Dose, 0.065–0.32 Gm., 1–5 gr.

Terebinthina Canadensis (Canada Turpentine—Canada Balsam, Balsam of Fir). A liquid oleoresin obtained from *Abies balsamea.* Used locally.

Terpini Hydras (Terpin Hydrate). Hydrate of the diatomic alcohol terpin. Occurs in colorless crystals.

Dose, 0.13–1.3 Gm., 2–20 gr.

***Terpinol.** An oily body obtained from terpin hydrate by the action of an acid thereon.

Dose, 0.32–1.3 C.c., 5–20 ♏.

***Tetronal** (Disulphon-diethylmethane). Colorless, shining, odorless plates.

Dose, 1.0–2.0 Gm., 15–31 gr.

***Thallin** (Tetra-hydro-para-chinanisol). A colorless powder, soluble in water, and unites with acids to form salts. Used as antipyrine.

Dose, 0.130–0.6 Gm., 2–10 gr.

***Theobrominæ Sodio-salicylas** (Diuretin). A white powder which decomposes upon exposure to the atmosphere.

Dose, 0.6–1.3 Gm., 10–20 gr.

Thymol (Thymol). Large, colorless, translucent crystals usually obtained from the oil of thyme.

Dose, 0.032–0.19 Gm., 1–3 gr.

***Thyroid Gland.** The desiccated gland of sheep.

Dose, 0.32–0.6 Gm., 5–10 gr.

Tinctura Aconiti (Tincture of Aconite). 35 Gm. of aconite-root to 100 C.c. of tincture.

Dose, 0.06–0.3 C.c., 1–5 ♏.

Tinctura Aloes (Tincture of Aloes). 10 Gm. of purified aloes and 20 Gm. of glycyrrhiza to 100 C.c. of tincture.
Dose, 1.8–7.5 C.c., ½–2 fʒ.

Tinctura Aloes et Myrrhæ (Tincture of Aloes and Myrrh). 10 Gm., each, of purified aloes, myrrh, and glycyrrhiza to 100 C.c. of tincture.
Dose, 1.8–7.5 C.c., ½–2 fʒ.

Tinctura Arnicæ Florum (Tincture of Arnica-flowers). Made with 20 Gm. of arnica-flowers to 100 C.c. of tincture.
Dose, 0.6–1.8 C.c., 10–30 ♏.

Tinctura Arnicæ Radicis (Tincture of Arnica-root). 10 Gm. of arnica-root to 100 C.c. of tincture.
Dose, 0.6–1.8 C.c., 10–30 ♏.

Tinctura Asafœtidæ (Tincture of Asafetida). 20 Gm. of asafetida to 100 C.c. of tincture.
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Aurantii Amari (Tincture of Bitter-orange Peel). 20 Gm. of bitter-orange peel to 100 C.c. of tincture.
Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Aurantii Dulcis (Tincture of Sweet-orange Peel). 20 Gm. of sweet-orange peel to 100 C.c. of tincture.
Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Belladonnæ Foliorum (Tincture of Belladonna-leaves). 15 Gm. of the leaves to 100 C.c. of tincture.
Dose, 0.3–1.0 C.c., 5–16 ♏.

Tinctura Benzoini (Tincture of Benzoin). 20 Gm. of benzoin to 100 C.c. of tincture.
Dose, 0.6–1.8 C.c., 10–30 ♏.

Tinctura Benzoini Composita (Compound Tincture of Benzoin). 12 Gm. of benzoin, 2 Gm. of purified aloes, 8 Gm. of storax, 4 Gm. of balsam of tolu, to 100 C.c. of tincture.
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Bryoniæ (Tincture of Bryonia). 10 Gm. of bryonia (recently dried) to 100 C.c. of tincture.

Dose, 0.6–7.5 C.c., 10 ♏–2 fʒ.

Tinctura Calendulæ (Tincture of Calendula). 20 Gm. of calendula to 100 C.c. of tincture. Used externally.

Tinctura Calumbæ (Tincture of Calumba). 10 Gm. of calumba to 100 C.c. of tincture.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Tinctura Cannabis Indicæ (Tincture of Indian Cannabis). 15 Gm. of Indian cannabis to 100 C.c. of tincture.

Dose, 1.0–3.7 C.c., 16 ♏–1 fʒ.

Tinctura Cantharidis (Tincture of Cantharides). 5 Gm. of cantharides to 100 C.c. of tincture.

Dose, 0.06–0.6 C.c., 1–10 ♏.

Tinctura Capsici (Tincture of Capsicum). 5 Gm. of capsicum to 100 C.c. of tincture.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Tinctura Cardamomi (Tincture of Cardamom). 10 Gm. of cardamom to 100 C.c. of tincture.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Cardamomi Composita (Compound Tincture of Cardamom). 2 Gm. of cardamom, 2 Gm. of Cassia cinnamon, 1 Gm. of caraway, 0.5 Gm. of cochineal, to 100 C.c. of tincture.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Catechu Composita (Compound Tincture of Catechu). 10 Gm. of catechu, 5 Gm. of Cassia cinnamon, to 100 C.c. of tincture.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Tinctura Chiratæ (Tincture of Chirata). 10 Gm. of chirata to 100 C.c. of tincture.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Tinctura Cimicifugæ (Tincture of Cimicifuga). 20 Gm. of cimicifuga to 100 C.c. of tincture.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Cinchonæ (Tincture of Cinchona). 20 Gm. of cinchona to 100 C.c. of tincture.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Cinchonæ Composita (Compound Tincture of Cinchona—Huxham's Tincture). 10 Gm. of red cinchona, 8 Gm. of bitter-orange peel, 2 Gm. of serpentaria, and glycerin, water, and alcohol sufficient to make 100 C.c. of tincture.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Tinctura Cinnamomi (Tincture of Cinnamon). Made with 10 Gm. of Ceylon cinnamon to each 100 C.c. of tincture.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Colchici Seminis (Tincture of Colchicum-seed—Tinctura Colchici, Pharm. 1880). 15 Gm. of colchicum-seed to 100 C.c. of tincture.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Croci (Tincture of Saffron). 10 Gm. of saffron to 100 C.c. of tincture.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Cubebæ (Tincture of Cubeb). 20 Gm. of cubebs to 100 C.c. of tincture.

Dose, 1.8–15.0 C.c., ½–4 fʒ.

Tinctura Digitalis (Tincture of Digitalis). 15 Gm. of digitalis to 100 C.c. of tincture.

Dose, 0.6–1.2 C.c., 10–20 ♏.

Tinctura Ferri Chloridi (Tincture of Ferric Chloride—Tincture of Iron). 25 C.c. of solution of ferric chloride in 100 C.c. of tincture.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Tinctura Gallæ (Tincture of Nutgall). 20 Gm. of nutgall to 100 C.c. of tincture.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Gelsemii (Tincture of Gelsemium). 15 Gm. of gelsemium to 100 C.c. of tincture.

An unofficial tincture of much greater strength is sometimes employed in the Southern and Western States. The dose of this should, of course, be less.

Dose, 0.6–1.2 C.c., 10–20 ♏.

Tinctura Gentianæ Composita (Compound Tincture of Gentian). 10 Gm. of gentian, 4 Gm. of bitter-orange peel, 1 Gm. of cardamom, to each 100 C.c. of tincture.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Guaiaci (Tincture of Guaiac). 20 Gm. of guaiac to 100 C.c. of tincture.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Guaiaci Ammoniata (Ammoniated Tincture of Guaiac). 20 Gm. of guaiac to 100 C.c. of tincture. The menstruum employed is aromatic spirit of ammonia.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Herbarum Recentium (Tincture of Fresh Herbs). 50 Gm. of the fresh herb to each 100 C.c. of tincture.

The dose depends upon the drug from which it is manufactured.

Tinctura Humuli (Tincture of Hops). 20 Gm. of hops to 100 C.c. of tincture.

Dose, 15.0–89.0 C.c., ½–3 f℥.

Tinctura Hydrastis (Tincture of Hydrastis). 20 Gm. of hydrastis to 100 C.c. of tincture.

Dose, 1.8–7.5 C.c., ½–2 fʒ.

Tinctura Hyoscyami (Tincture of Hyoscyamus). 15 Gm. of hyoscyamus to 100 C.c. of tincture.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Iodi (Tincture of Iodine). 7 Gm. of iodine to 100 C.c. of tincture.

Dose, 0.18–0.3 C.c., 3–5 ♏.

Tinctura Ipecacuanhæ et Opii (Tincture of Ipecac and Opium). Each C.c. is equal in strength to 1 C.c. of tincture of deodorized opium and 0.1 C.c. of fluid extract of ipecac. Each 10 ♏ is equal to about 1 gr. of powdered opium and 1 gr. of ipecac.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Tinctura Kino (Tincture of Kino). 10 Gm. of kino to 100 C.c. of tincture.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Krameriæ (Tincture of Krameria). 20 Gm. of krameria to 100 C.c. of tincture.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Lactucarii (Tincture of Lactucarium). 50 Gm. of lactucarium to 100 C.c. of tincture.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Lavandulæ Composita (Compound Tincture of Lavender—Compound Spirit of Lavender). 0.8 C.c. of oil of lavender-flowers, 0.2 C.c. of oil of rosemary, 2.0 Gm. of Cassia cinnamon, 0.5 Gm. of cloves, 1.0 Gm. of nutmeg, 1.0 Gm. of red saunders, to 100 C.c. of tincture.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Lobeliæ (Tincture of Lobelia). 20 Gm. of lobelia to 100 C.c. of tincture.

Dose, 0.6–1.8 C.c., 10–30 ♏, as expectorant or depressant; or 3.7–7.5 C.c., 1–2 fʒ, as emetic.

Tinctura Matico (Tincture of Matico). 10 Gm. of matico to 100 C.c. of tincture.

Dose, 1.8–7.5 C.c., 1–2 fʒ.

Tinctura Moschi (Tincture of Musk). 5 Gm. of musk to 100 C.c. of tincture.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Tinctura Myrrhæ (Tincture of Myrrh). 20 Gm. of myrrh to 100 C.c. of tincture.

Dose, 0.3–1.0 C.c., 5–16 ♏.

Tinctura Nucis Vomicæ (Tincture of Nux Vomica). 2 Gm. of extract of nux vomica to 100 C.c. of tincture. This is equal to 0.3 Gm. of alkaloid to 100 C.c. of tincture. 5 ♏, or 0.3 C.c., contain about $\frac{1}{66}$ gr., or 0.00098 Gm., of alkaloids.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Tinctura Opii (Tincture of Opium—Laudanum). 10 Gm. of powdered opium to 100 C.c. of tincture. 10 ♏, or 0.6 C.c., are equal to about 1 gr., or 0.065 Gm., of powdered opium.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Tinctura Opii Camphorata (Camphorated Tincture of Opium—Paregoric). 4 Gm., each, of powdered opium, benzoic acid, and camphor, 4 C.c. of oil of anise, 40 C.c. of glycerin, to 1000 C.c. of tincture.

Dose, 1.8–15.0 C.c., ½–4 fʒ.

Tinctura Opii Deoderati (Tincture of Deodorized Opium—Tinctura Opii Deodorata, Pharm. 1880). Same strength as tincture of opium.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Tinctura Physostigmatis (Tincture of Physostigma). 15 Gm. of physostigma to 100 C.c. of tincture.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Tinctura Pyrethri (Tincture of Pyrethrum). 20 Gm. of pyrethrum to 100 C.c. of tincture. Used externally.

Tinctura Quassiæ (Tincture of Quassia). 10 Gm. of quassia to 100 C.c. of tincture.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Quillajæ (Tincture of Quillaja). 20 Gm. of quillaja to 100 C.c. of tincture. Used externally.

Tinctura Rhei (Tincture of Rhubarb). 10 Gm. of rhubarb, 2 Gm. of cardamom, to 100 C.c. of tincture.
Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Rhei Aromatica (Aromatic Tincture of Rhubarb). 20 Gm. of rhubarb, 4 Gm., each, of Cassia cinnamon and cloves, 2 Gm. of nutmeg, in 100 C.c. of tincture.
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Rhei Dulcis (Sweet Tincture of Rhubarb). 10 Gm. of rhubarb, 4 Gm. of glycyrrhiza, 4 Gm. of anise, 1 Gm. of cardamom, to 100 C.c. of tincture.
Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Sanguinariæ (Tincture of Sanguinaria). 15 Gm. of sanguinaria, 2 C.c. of acetic acid, to 100 C.c. of tincture.
Dose, 0.3–1.8 C.c., 5–30 ♏.

Tinctura Scillæ (Tincture of Squill). 15 Gm. of squill to 100 C.c. of tincture.
Dose, 0.6–1.2 C.c., 10–20 ♏.

Tinctura Serpentariæ (Tincture of Serpentaria). 10 Gm. of serpentaria to 100 C.c. of tincture.
Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Stramonii Seminis (Tincture of Stramonium-seed —Tinctura Stramonii, Pharm. 1880). 15 Gm. of stramonium-seed to 100 C.c. of tincture.
Dose, 0.6–1.2 C.c., 10–20 ♏.

Tinctura Strophanthi (Tincture of Strophanthus). 5 Gm. of strophanthus to 100 C.c. of tincture.
Dose, 0.18–0.5 C.c., 3–8 ♏.

Tinctura Sumbul (Tincture of Sumbul). 10 Gm. of sumbul to 100 C.c. of tincture.
Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Tolutani (Tincture of Tolu). 10 Gm. of balsam of tolu to 100 C.c. of tincture.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Tinctura Valerianæ (Tincture of Valerian). 20 Gm. of valerian to 100 C.c. of tincture.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Tinctura Valerianæ Ammoniata (Ammoniated Tincture of Valerian). 20 Gm. of valerian to 100 C.c. of tincture. The menstruum in this tincture is aromatic spirit of ammonia.

Dose, 1.8–3.7 C.c., ½–1 fʒ.

Tinctura Vanillæ (Tincture of Vanilla). 10 Gm. of vanilla to 100 C.c. of tincture.

Dose, 0.6–1.8 C.c. 10–30 ♏.

Tinctura Veratri Viridis (Tincture of Veratrum Viride). 40 Gm. of veratrum viride to each 100 C.c. of tincture.

Dose, 0.06–0.5 C.c., 1–8 ♏.

Tinctura Zingiberis (Tincture of Ginger). 20 Gm. of ginger to 100 C.c. of tincture.

Dose, 1.2–3.7 C.c., 20–60 ♏.

Tragacantha (Tragacanth). A gummy exudation from *Astragalus gummifer* and other species of *Astragalus*. Used as excipient.

Mucilago Tragacanthæ.

Dose, 3.7–15.0 C.c. 1–4 fʒ.

***Trional** (Diethyl-sulphon-ethyl-methane). Shining, colorless, odorless plates.

Dose, 1.0–2.0 Gm., 15–31 gr.

Triticum (Triticum—Couch-grass). The rhizome of *Argopyrum repens*, gathered in the spring and derived from the roots.

Dose, 7.8–15.5 Gm., 2–4 ʒ, in infusion.

Extractum Tritici Fluidum.

Dose, 7.5–15.0 C.c., 2–4 fʒ.

Trituratio Elaterini (Trituration of Elaterin). 1 Gm. of elaterin with 9 Gm. of sugar of milk. Each 0.065 Gm., 1 gr., of triturate contains .006 Gm., $\frac{1}{10}$ gr., of elaterin.

Dose, 0.021–0.043 Gm., $\frac{1}{3}$–$\frac{2}{3}$ gr.

Trochsici Acidi Tannici (Troches of Tannic Acid). There is contained in each troche 0.06 Gm., about 1 gr., of tannic acid.

Dose, 1, as required.

Trochisci Ammonii Chloridi (Troches of Ammonium Chloride). Each contains 0.1 Gm., about 1$\frac{1}{2}$ gr., of ammonium chloride and 0.25 Gm., 4 gr., of extract of glycyrrhiza.

Dose, 1, as required.

Trochisci Catechu (Troches of Catechu). Each contains 0.06 Gm., or about 1 gr., of catechu.

Dose, 1, as required.

Trochisci Cretæ (Troches of Chalk). Each contains 0.25 Gm., or about 4 gr., of prepared chalk.

Dose, 1, as required.

Trochisci Cubebæ (Troches of Cubeb). Each contains 0.04 Gm., or about $\frac{2}{3}$ gr., of oleoresin of cubeb.

Dose, 1, as required.

Trochisci Ferri (Troches of Iron). Each contains 0.3 Gm., or about 5 gr., of ferric hydrate.

Dose, 1, as required.

Trochisci Glycyrrhizæ et Opii (Troches of Glycyrrhiza and Opium). Each contains 0.15 Gm., or about 2$\frac{1}{3}$ gr., of extract of glycyrrhiza and 0.005 Gm., or about $\frac{1}{12}$ gr., of powdered opium.

Dose, 1, as required.

Trochisci Ipecacuanhæ (Troches of Ipecac). Each contains 0.02 Gm., or about $\frac{1}{3}$ gr., of ipecac.

Dose, 1, as required.

Trochisci Krameriæ (Troches of Krameria). Each contains 0.06 Gm., or about 1 gr., of extract of krameria.

Dose, 1, as required.

Trochisci Menthæ Piperitæ (Troches of Peppermint). Each contains 0.01 C.c., or about $\frac{1}{6}$ ♏, of oil of peppermint.

Dose, 1, as required.

Trochisci Morphinæ et Ipecacuanhæ (Troches of Morphine and Ipecac). Each contains 0.0016 Gm., or about $\frac{1}{40}$ gr., of morphine sulphate and 0.005 Gm., or about $\frac{1}{12}$ gr., of ipecac.

Dose, 1, as required.

Trochisci Potassii Chloratis (Troches of Potassium Chlorate). Each contains 0.3 Gm., or about 5 gr., of potassium chlorate.

Dose, 1 every three or four hours.

Trochisci Santonini (Troches of Santonin). Each contains 0.03 Gm., or about $\frac{1}{2}$ gr., of santonin.

Dose, 1 or 2, night and morning.

Trochisci Sodii Bicarbonatis (Troches of Sodium Bicarbonate). Each contains 0.2 Gm., or about 3 gr., of sodium bicarbonate.

Dose, 1, as required.

Trochisci Zingiberis (Troches of Ginger). Each contains 0.2 C.c., or about 3 ♏, of tincture of ginger.

Dose, 1, as required.

***Tropacocaine Hydrochloras.** An alkaloidal salt from a Java coca plant, succedaneum for cocaine.

***Tuberculin** (Koch's Lymph).
Used hypodermically.
Initial dose, 0.0005–0.025 Gm., $\frac{1}{130}$–$\frac{1}{3}$ gr.

Ulmus (Elm—Slippery Elm). The inner bark of elm.
Mucilago Ulmi.
Dose, any quantity.

Unguentum (Ointment). Contains—lard, 80 per cent.; white wax, 20 per cent.

Unguentum Acidi Carbolici (Ointment of Carbolic Acid). Contains 5 per cent. of carbolic acid.

Unguentum Acidi Tannici (Ointment of Tannic Acid). Contains 20 per cent. of tannic acid.

Unguentum Aquæ Rosæ (Ointment of Rose-water). Contains spermaceti, white wax, expressed oil of almond, stronger rose-water, and sodium borate.

Unguentum Belladonnæ (Belladonna Ointment). Contains about 10 per cent. of alcoholic extract of belladonna-leaves.

Unguentum Chrysarobini (Chrysarobin Ointment). Contains 5 per cent. of chrysarobin.

***Unguentum Crédé** (Crédé's Ointment). An ointment made by incorporating soluble metallic silver (Argentum Colloidale) with an ointment base. Crédé's formula is as follows:

℞ Argenti colloidale,	15 parts;	
Aquæ destillatæ,	5 "	
Ciræ albæ,	10 "	
Adipes benzoinatis,	70 "	.—M.

Dose, 1.0–4.0 Gm., 15–60 gr., by inunction.

Unguentum Diachylon (Diachylon Ointment). Contains 50 per cent. of lead plaster.

Unguentum Gallæ (Nutgall Ointment). Contains 20 per cent. of nutgall.

Unguentum Hydrargyri (Mercurial Ointment—Blue Ointment). Contains 50 per cent. of mercury.

Unguentum Hydrargyri Ammoniati (Ointment of Ammoniated Mercury). Contains 10 per cent. of ammoniated mercury.

Unguentum Hydrargyri Nitratis (Ointment ot Mercuric Nitrate—Citrine Ointment). About 7 per cent. of mercury and about 17.5 per cent. of nitric acid enter into the manufacture of this ointment.

Unguentum Hydrargyri Oxidi Flavi (Ointment of Yellow Mercuric Oxide). Contains 10 per cent. of yellow mercuric oxide.

Unguentum Hydrargyri Oxidi Rubri (Ointment of Red Mercuric Oxide). Contains 10 per cent. of red mercuric oxide.

Unguentum Iodi (Iodine Ointment). Contains 4 per cent. of iodine and 1 per cent. of potassium iodide.

Unguentum Iodoformi (Iodoform Ointment). Contains 10 per cent. of iodoform.

Unguentum Picis Liquidæ (Tar Ointment). Contains 50 per cent. of tar.

Unguentum Plumbi Carbonatis (Ointment of Lead Carbonate). Contains 10 per cent. of lead carbonate.

Unguentum Plumbi Iodidi (Ointment of Lead Iodide). Contains 10 per cent. of lead iodide.

Unguentum Potassii Iodidi (Ointment of Potassium Iodide). Contains 12 per cent. of potassium iodide and 1 per cent. of sodium hypophosphite.

Unguentum Stramonii (Stramonium Ointment). Contains 10 per cent. of extract of stramonium-seed.

Unguentum Sulphuris (Sulphur Ointment). Contains 30 per cent. of washed sulphur.

Unguentum Veratrinæ (Veratrine Ointment). Contains 4 per cent. of veratrine.

Unguentum Zinci Oxidi (Ointment of Zinc Oxide). Contains 20 per cent. of zinc oxide.

***Uralium** (Ural—Chloral-urethane). A sparingly soluble, clear, colorless, crystalline substance.

Dose, 1.0–1.9 Gm., 15–30 gr.

***Urethane** (Ethyl-urethane). Colorless, deliquescent crystals. Very soluble in water and alcohol.

Dose, 0.65–1.9 Gm., 10–30 gr.

***Urotropin** (Ammonium Formaldehyde). A white crystalline salt, freely soluble in water, made by the action of formaldehyde upon ammonia.

Dose, 0.32–1.0 Gm., 5–15 gr.

Uva Ursi (Uva Ursi—Bearberry). The leaves of *Arctostaphylos Uva-ursi.*

Dose, 3.75–15.0 Gm., 2–4 ʒ, in infusion.

Extractum Uvæ Ursi.

Dose, 0.065–0.32 Gm., 1–5 gr.

Extractum Uvæ Ursi Fluidum.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Valeriana (Valerian). The rhizome and roots of *Valeriana officinalis.*

Extractum Valerianæ Fluidum.

Dose, 1.8–3.7 C.c., $\frac{1}{2}$–1 fʒ.

Tinctura Valerianæ.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Tinctura Valerianæ Ammoniata.

Dose, 1.8–3.75 C.c., $\frac{1}{2}$–1 fʒ.

Vanilla (Vanilla). The fruit of *Vanilla planifolia.*

Dose, 15. C.c., in infusion.

Tinctura Vanillæ.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Veratrina (Veratrine). A mixture of alkaloids obtained from the seed of *Asagræa officinalis.*

Dose, 0.0016–0.006 Gm., $\frac{1}{40}$–$\frac{1}{10}$ gr.

Oleatum Veratrinæ. Used locally with care.

Unguentum Veratrinæ. Used locally with care.

Veratrum Viride (Veratrum Viride—American Hellebore). The rhizome and roots of *Veratrum viride.*

Extractum Veratri Viridis Fluidum.

Dose, 0.06–0.18 C.c., 1–3 ♏.

Tinctura Veratri Viridis.

Dose. 0.06–0.5 C.c., 1–8 ♏.

Viburnum Opulus (Viburnum Opulus—Cramp-bark). The bark of *Viburnum Opulus.*

Extractum Viburni Opuli Fluidum.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Viburnum Prunifolium (Black Haw). The bark of *Viburnum prunifolium.*

Extractum Viburni Prunifolii Fluidum.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Vinum Album (White Wine). Wine made by fermenting grape-juice freed from seeds, stems, and skins. Should contain not more than 14 or less than 10 per cent. by weight of alcohol.

Dose, as required.

Vinum Antimonii (Wine of Antimony). 0.4 Gm. of antimony and potassium tartrate to 100 C.c. of the preparation. This preparation contains almost 2 grains of antimony and potassium tartrate to the fluidounce.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Vinum Colchici Radicis (Wine of Colchicum-root). 40 Gm. of colchicum-root in 100 C.c. of the preparation.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Vinum Colchici Seminis (Wine of Colchicum-seed). 15 Gm. of colchicum-seed in 100 C.c. of the preparation.

Dose, 1.0–3.7 C.c., 16–60 ♏.

Vinum Ergotæ (Wine of Ergot). 15 Gm. of ergot in 100 C.c. of the preparation.

Dose, 3.7–15.0 C.c., 1–4 fʒ.

Vinum Ferri Amarum (Bitter Wine of Iron). Contains 5 Gm. of soluble iron and quinine citrate in 100 C.c. of the preparation. Each teaspoonful, or 3.7 C.c., contains about 3 gr., or 0.19 Gm., of the citrate of iron and quinine.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Vinum Ferri Citratis (Wine of Ferric Citrate). Contains about 4 Gm. of iron and ammonium citrate in 100 C.c., or about 2¼ gr., or 0.14 Gm., in each teaspoonful, or 3.7 C.c.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

Vinum Ipecacuanhæ (Wine of Ipecac). 10 C.c. of fluid extract of ipecac in 100 C.c. of the preparation.

Dose, 0.6–1.9 C.c., 10–30 ♏, as expectorant; 1 ʒ as emetic for child.

Vinum Opii (Wine of Opium—Sydenham's Laudanum). 10 Gm. of powdered opium to 100 C.c. of preparation. 10 ♏, or 0.6 C.c., are equal to about 1 gr., or 0.06 Gm., of powdered opium.

Dose, 0.3–1.2 C.c., 5–20 ♏.

Vinum Rubrum (Red Wine). Wine made by fermenting grape juice in the presence of the skins of the grape. Should contain not more than 14 per cent. nor less than 10 per cent. by weight of alcohol.

Dose, as required.

Vitellus (Yolk of Egg). The yolk of the egg of *Gallus Bankiva*, var. *domestica*.

Glyceritum Vitelli.

Dose, 3.7–7.5 C.c., 1–2 fʒ.

***Warburg's Tincture**. The formula of Warburg, published in 1895, is as follows: Aloes soc., ℥xij; Rad. rhei (chinens.), Sem. angelicæ, Confec. democratis, āā ℥iv; Rad. gentianæ, Rad. zedoariæ, Pip. cubebæ, Myrrhæ elect., Camphor, Bolet. laricis, āā ʒj; Rad. helenii (s. enulæ), Croci sativi, Sem. fœniculi, Cretæ prep., āā ℥ij. Digest with 500 oz. of proof spirits in a water-bath for twelve hours, express, add 10 oz. of quinine bisulphate, dissolve by aid of water-bath, cool, and filter.

Dose, 15.0–30.0 C.c., 4–8 fʒ.

Xanthoxylum (Xanthoxylum—Prickly Ash). The bark of *Xanthoxylum Americanum* and *Xanthoxylum Clava-Herculis.*

Extractum Xanthoxyli Fluidum.

Dose, 0.6–1.8 C.c., 10–30 ♏.

***Xylenum** (Xylene—Xylol). An oily liquid obtained from wood-spirit or artificially from benzene derivatives.

Dose, 0.6–1.2 C.c., 10–20 ♏. Also used locally.

***Yersin's Curative Serum** (Anti-cholera Serum). Used hypodermically.

Dose, 20.0–60.0 C.c., 5–15 fʒ.

Zea (Zea—Corn-silk). The styles and stigmas of *Zea mays.*

**Extractum Zeæ Fluidum.*

Dose, 1.8–7.5 C.c., ½–2 fʒ.

***Zincum** (Zinc).

Zinci Acetas (Zinc Acetate). White lamellæ of a pearly lustre. Used locally in solution.

Zinci Bromidum (Zinc Bromide). A white granular powder. Very deliquescent.

Dose, 0.032–0.13 Gm., ½–2 gr.

Zinci Carbonas Præcipitatus (Precipitated Zinc Carbonate). A very fine white powder. Used externally.

Zinci Chloridum (Zinc Chloride). A white, granular, ve deliquescent powder or irregular masses or pencil Used locally.

Liquor Zinci Chloridi (Solution of Zinc Chloride). Us as a disinfectant.

Zinci Iodidum (Zinc Iodide). A white, granular, ve deliquescent powder.

Dose, 0.032–0.13 Gm., ½–2 gr.

Zinci Oxidum (Zinc Oxide). A fine white powder.

Dose, 0.065–0.32 Gm., 1–5 gr.

Oleatum Zinci. Used externally.

Unguentum Zinci Oxidi. Used externally.

Zinci Phosphidum (Zinc Phosphide). A dark-gray, grit powder or dark metallic fragments.

Dose, 0.0016–0.0032 Gm., $\frac{1}{40}$–$\frac{1}{20}$ gr.

Zinci Sulphas (Zinc Sulphate). Colorless transpare crystals.

Dose, 0.65–1.9 Gm., 10–30 gr., as emetic.

Zinci Valerianas (Zinc Valerianate). Light, white lamell

Dose, 0.016–0.065 Gm., ¼–1 gr.

Zingiber (Ginger). The rhizome of *Zingiber officinale.*

Dose, 0.6–1.9 C.c., 10–30 gr.

Extractum Zingiberis Fluidum.

Dose, 0.6–1.8 C.c., 10–30 ♏.

Oleoresina Zingiberis.

Dose, 0.03–0.06 C.c., ½–1 ♏.

Pulvis Aromaticus.

Dose, 0.6–2.0 Gm., 10–31 gr.

Pulvis Rhei Compositus.

Dose, 2.0–4.0 Gm., 31–62 gr.

Tinctura Zingiberis.

Dose, 1.2–3.7 C.c., 20 ♏–1 fʒ.

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APPENDIX.

THE COMMON POISONS AND THEIR ANTIDOTES.

THE general rules to be followed in the treatment of all cases of poisoning are to get rid of the poison, to render what is left in the stomach insoluble by means of a chemical antidote; to counteract its deleterious physiological effect by the administration of physiological antagonists; to apply stimulants and heat in the presence of exhaustion; to keep up the respiration and to use soothing and demulcent drinks in the presence of corrosion or irritation of the mucous membranes; the cautious use of opium to relieve pain; and the administration of oxygen in all cases where cyanosis is a prominent symptom.

To get Rid of the Poison.—This may be accomplished by the use of the stomach-pump or by the administration by the mouth of such emetics as mustard, alum, zinc sulphate, copper sulphate, or tartar emetic; when it is impractical to give the emetic by the mouth, a hypodermic injection of apomorphine may be employed.

In cases of poisoning where there is very great circulatory depression, all emetics are dangerous, as they increase the strain upon the heart, thereby increasing the danger to diastolic arrest. In such cases it is thought advisable to employ the stomach-pump or the œsophageal tube, although these, as well as emetics, are contra-indicated when the wall of the stomach has been violently corroded by the ingestion of strong mineral acids.

Chemical Antidotes.—In some cases before, but usually after, the administration of emetics or the use of the stomach-pump, we employ the chemical antidote to render the poison insoluble, and thereby prevent the absorption of whatever poisons have not been removed. In many instances it is advisable to again administer an emetic or to wash out the stomach after the chemical antidote has been given.

Physiological Antagonists.—For many of the vegetable poisons and synthetic products we have no official chemical antidote, and therefore, in addition to the use of emetics or the stomach-pump, it becomes necessary to administer remedies that are antagonistic in their action to the toxic effect of the poison.

To Overcome Depression.—Depression and exhaustion are present during either the early or the later stages of almost all poisons, and therefore, after having administered the appropriate remedies, it is necessary to have the patient assume a recumbent position, to surround him with hot-water bags or bottles and cover him with blankets, and to stimulate him with strychnine, digitalis, atropine, alcohol, aromatic spirits of ammonia, Hoffman's anodyne, or the administration of hot tea or coffee.

To Keep up Respiration.—Our most powerful respiratory stimulants are strychnine, caffeine, and hot coffee; but, in addition to these, it frequently becomes necessary to resort to artificial respiration by the Sylvester or the Marshall Hall method, by Laborde's rhythmic contraction of the tongue, or by the use of Fell's, Bloom's, or Mattas' apparatus.

In cases of opium-poisoning, it is sometimes necessary, in addition to the above methods, to arouse the patient by crying loudly into his ears "to breathe," by irritating him him with an electric brush, or by mild flagellation.

Soothing Applications.—In all cases of corrosive poisons, after the usual methods have been resorted to, it becomes necessary to administer to the patient soothing or demulcent drinks, such as milk, white of egg, olive oil, and mucilage of acacia or emulsion of almonds. There are two irritant poisons, phosphorus and carbolic acid, in which oil should not be given, on account of its tendency to increase the absorption of these two substances.

Acetanilid and Antipyrine.—External heat, respiratory and circulatory stimulants, atropine and strychnine, oxygen inhalations to overcome cyanosis.

Acid, Carbolic.—Alcohol or soluble sulphates, such as sodium and magnesium sulphate, to be followed by emetics or by the use of the stomach-pump. The irritated mucous membrane may be soothed by permitting the patient to take egg-albumin or milk. Glycerin and oils should be avoided. The patient should be stimulated with digitalis, strychnine, or atropine, and external heat should be applied to the body.

Acid, Hydrocyanic, and Cyanides.—Cobalt nitrate and ferrous salts are the chemical antidotes. Emetics or stomach-pump. Ether, alcohol, ammonia, as stimulants. Cold affusions to the spine. Artificial respiration.

Aconite.—No emetics should be given unless the patient is seen before the symptoms of poisoning appear, but the œsophageal tube or the stomach-pump may be used. Place the patient in a prone position, with feet higher than the head, from which he should not be permitted to arise; apply external heat; administer hypodermically Hoffman's anodyne, strychnine, atropine, and digitalis; digitalis being considered the best physiological antagonist. Artificial respiration. A whiff of amyl nitrite if the heart fails.

Acids, Mineral.—The employment of emetics, or the use of the stomach-pump or even the soft-rubber œsophageal tube is dangerous after a concentrated mineral acid has been swallowed, as the acid produces so much corrosion of the walls of the stomach that the use of the above-mentioned measures may lead to perforation; upon the other hand, if the acids have been very freely diluted before being taken, no harm could result from the use of the emetics or the œsophageal tube. The correct method of procedure after the ingestion of mineral acids is to administer weak alkalies, such as lime-water, magnesia, and soap, to neutralize the acid, and to employ bland oils, milk, and mucilage of acacia to soothe the mucous membranes. Administer opium hypodermically to relieve pain. Apply external heat and stimulants if required to overcome depression and collapse.

The administration of any alkaline carbonate is contraindicated, on account of the liberation of carbon dioxide when the carbonates are brought in contact with an acid, thereby distending the stomach and increasing the danger of perforation.

Acid, Oxalic.—The treatment of poisoning from oxalic acid is similar to the measures employed in the case of poisoning by mineral acids, except in the selection of the chemical antidote. Lime-water, saccharated lime, syrup of lime, or chalk may be employed, with the object in view of neutralizing the acid and the formation of calcium oxalate, which is the only alkaline oxalate which is insoluble and non-toxic.

Alkalies: Ammonia-water, Potassa, Soda, and Lye.—Administer dilute acids, such as vinegar, orange-juice, and lemon-juice. Protect the mucous membranes by the administration of milk and bland oils.

Relieve pain by opiates, and overcome depression by stimulants and the application of external heat.

Alkaloids.—Tannic acid renders many alkaloids insoluble. Potassium permanganate oxidizes morphine and many other alkaloids.

The stomach-tube is to be used, emetics given, external heat applied, and stimulants and artificial respiration employed if indicated. The physiological antagonists differ according to the form of alkaloidal poison.

Antimony, Salts and Preparations.—Tannic acid renders the salt of antimony insoluble. Apply the stomach-tube or emetics. Emollient drinks are to be given freely to soothe the mucous membrane. Use opium to relieve pain. Atropine, digitalis, strychnine, ether, and external heat are employed to prevent depression or collapse.

Antipyrine.—See *Acetanilid.*

Arsenic, Salts and Preparations.—Freshly prepared hydrated oxide of iron with magnesia; dialized iron; stomach-pump or emetics. Opium to relieve pain; demulcent drinks to protect the mucous membranes; stimulants and external heat to prevent or overcome collapse. To prepare arsenic antidote, mix 1 ounce and 5 drachms of solution of ferric sulphate with 3 ounces of water. Mix 3 drachms of magnesia with about a pint and a half of water. Mix the two liquids and shake for a few moments. If the solution of ferric sulphate is not at hand, the tincture of chloride of iron or Monsel's solution may be substituted for it in the above formula; being weaker in iron, however, larger quantities are required.

Belladonna, Hyoscyamus, or Stramonium.—Promote vomiting if the patient is seen before the poisons are absorbed. Strychnine and external heat in the presence of exhaustion.

Cannabis Indica.—Although the symptoms are frequently alarming, there is no death recorded from over doses of this substance. The patient is treated symptomatically.

Cantharides.—Mucilage of acacia, boiled starch, emetics, or stomach-pump, water in large quantities to flush kidneys, sterilized oils injected into the bladder to relieve irritation, opium to relieve pain. Avoid oils, fats, or milk, which promote absorption of the poison from the stomach.

Carbon-dioxide, Coal-gas.—Inhalation of oxygen, artificial respiration. Saline transfusion, stimulation with strychnine, and the application of external heat.

Chloral, Chlorodyne.—Stomach-pump or emetics, strychnine, external heat.

Chloroform, Ingested.—Solution of sodium carbonate, emetics, stomach-pump, atropine, strychnine, artificial respiration, external heat.

Cocaine.—Stimulants, external heat, moderate doses of morphine.

Colchicum.—Emetics, stomach-pump, tannic acid, opium to relieve the pain.

Conium.—Emetics or stomach-pump, strychnine, digitalis, external heat.

Copper Salts.—Yellow prussiate of potassium, emetics or stomach-pump, followed by demulcent drinks. External heat and stimulants to overcome depression, and opium to relieve pain.

Croton Oil.—Stomach-pump or emetics; egg-albumin, milk; opium to relieve pain; external heat and stimulation to overcome depression.

Digitalis.—Tannic acid, emetics, or stomach-pump, if the patient is seen before absorption occurs. Tincture of aconite as a physiological antagonist. Place the patient in a prone position, which must be continued until the symptoms of poisoning have completely disappeared. External heat and stimulation with ammonia, ether, alcohol, or atropine in the presence of collapse.

Ergot.—If spastic symptoms predominate, give chloral guardedly. If symptoms of circulatory depression are pronounced, stimulate with strychnine, atropine, alcohol, and ammonia.

Gelsemium.—Tannic acid and emetics or stomach-pump; strychnine, atropine, digitalis, and ammonia. The patient should assume the prone position, and external heat should be applied.

Hyoscyamus.—See *Belladonna.*

Iodine.—Boiled starch, emetics, or stomach-pump. Demulcent drinks. Relieve pain with opium.

Lead Salts.—Emetics or stomach-pump; soluble sulphate, such as magnesium or sodium sulphates; relieve pain with opiates.

Mercury, Salts of.—Emetics or stomach-pump; egg-albumin, milk. If pain is severe, relieve it with opium.

Monsel's Solution.—The treatment is similar to that of *Mineral acids.*

Muscarine or Mushroom.—Employ emetics or the œsophageal tube, and apply the physiological antagonist, atropine. Apply external heat or use stimulants, and give the patient full doses of castor oil.

Mussels and Other Food Products.—Having no chemical antidote or physiological antagonists, our attention must be devoted to the elimination of the poison by the use of emetics, the stomach-pump or the œsophageal tube, and by the administration of an active cathartic. External heat and stimulants may be resorted to, to overcome depression and collapse.

Nitroglycerine and Amyl Nitrite.—Atropine, ergot, strychnine, ammonia, artificial respiration, external heat.

Nux Vomica—Ignatia or Strychnine and Brucine.—The patient should be promptly anesthetized with chloroform or chloral, and bromides given by the rectum. Amyl nitrite should be given hypodermically in cases in which breathing is prevented by spasm of the respiratory muscles.

After the muscles are relaxed the chloroform may be administered by inhalation. When practicable, the stomach should be washed out while the patient is under the influence of chloroform, and before removing the tube chloral or bromides may be introduced through it into the stomach. The administration of ether and emetics should be avoided, and the patient should be carefully guarded against all loud noises and jars.

Opium: Its Preparations, Alkaloids, also Heroin and Dionin.—Stomach-pump or emetics; strychnine, caffeine, and hot coffee as physiological antagonists.

Tannic acid or a solution of potassium permanganate as a chemical antidote.

The great danger to be feared in cases of opium-poisoning is the respiratory failure; therefore, every means should be employed to sustain the respiratory function during the continuation of the symptoms. With this end in view, in addition to the use of physiological antagonists, the patient must be aroused by shaking, mild flagellation, the use of the electric brush, and by shouting loudly into his ears at regular intervals "to breathe." Should all these means fail, artificial respiration should be resorted to. External heat and stimulants should be applied during the later stages, when the patient goes into collapse.

Phosphorus and its Preparations.—It should not be forgotten that the symptoms of phosphorus-poisoning do not usually make their appearance until from eight to ten hours after the ingestion of the poison, and it is during this interval that the measures employed to counteract the effects of the poison are of the greatest efficacy. The stomach should be freely washed out with two or three gallons of a 1 per cent. solution of potassium permanganate. Oils are contra-indicated, as they increase the absorption of this poison.

Physostigma or Eserine.—Emetics or the stomach-pump. Atropine is the physiological antagonist.

Potassium Chlorate.—Emetics or the stomach-pump. Stimulate with strychnine, ammonia, alcohol, or atropine.

Silver Nitrate.—Administer a solution of common salt, freely and immediately wash out the stomach with the pump or give emetics. Apply external heat.

Turpentine, Oil of, and Other Volatile Oils.—Magnesium sulphate, emetics or stomach-pump, milk, mucilage of acacia, emulsion of almonds, flaxseed mucilage.

Veratrum Viride.—See *Aconite.*

Zinc Salts.—Sodium, potassium, and magnesium carbonates well diluted in water, eggs, milk, and mucilaginous drinks. Emetics and stomach-pump. Opium to relieve pain. Stimulants and external heat to overcome depression and collapse.

EXERCISES.

In consideration of the importance that is being given the Metric system, the following few pages of exercises are appended. The student is strongly urged to work out the answers which follow the list of questions. The *number* of the answer corresponds with the number of the question.

1. How many Metres in circumference is the earth around its poles?
2. How many inches in one Metre?
3. Write the abbreviation of one, three, five Metres.
4. Repeat the Metric table of Lengths.
5. What part of a Metre is a decimetre?
6. How many inches in one decimetre?
7. How many inches in two decimetres?
8. Write abbreviation for decimetre.
9. What part of a Metre is one centimetre?
10. How many inches in one centimetre?
11. Write abbreviation for one centimetre.
12. What part of a Metre is one millimetre?
13. How many inches in one millimetre?
14. How many millimetres in one inch?
15. How many centimetres in one inch?
16. How many millimetres in four inches?
17. How many inches in two hundred and fifty millimetres?
18. What is a micromillimetre?

19. A millimetre is what part of an inch?
20. How would you read 1 mm.?
21. How would you read M. .001?
22. How would you read M. .005?
23. How would you read M. .055?
24. How would you read M. .05?
25. How would you read M. .5?
26. How would you read M. 2.?
27. How would you read M. 10.?
28. How would you read Dm. 2.?
29. How would you read M. 100.?
30. How would you read M. 1000.?
31. How would you read M. 10,000.?
32. How would you write one millimetre?
33. How would you write twenty-five millimetres?
34. How would you write one hundred millimetres?
35. How would you write one centimetre?
36. How would you write ten centimetres?
37. What is the difference between ten centimetres and one decimetre?
38. Write one decimetre.
39. How would you write one Dekametre?
40. How would you write two Hectometres?
41. How would you write three Kilometres?
42. How would you write four Myriametres?
43. What is the difference between a decimetre and a Dekametre?
44. What is a cubic Metre?
45. How many millimetres in three inches?
46. How would you write for one inch square of cantharidal pitch-plaster by the Metric method?
47. What is the unit of capacity?
48. Repeat the Metric table of Capacities.
49. Write the abbreviations for the Litre and its divisions.

50. Write the abbreviations for the multiples of the Litre.

51. How many pints in a Litre?

52. How many ounces in a Litre?

53. How many C.c. in a Litre?

54. What is the weight in Grammes of one C.c. of water at its maximum density?

55. What is the weight in grains of one C.c. of water at its maximum density?

56. How many C.c. in one fluidrachm?

57. How many C.c. in one fluidounce?

58. What is the equivalence in C.c. of one minim?

59. One C.c. is equal to how many minims?

60. What is the equivalence in ounces of 15 C.c.?

61. How would you read 10 C.c.?

62. How would you read 65 C.c.?

63. How would you read 1 L.?

64. How would you read L. .001?

65. How would you read L. .010?

66. How would you read L. 10.?

67. How would you read L. 101.?

68. How would you read L. 123.456?

69. What would you understand by a "fluid gramme"?

70. If the dose of Syrup of the Iodide of Iron is 1 C.c., how many doses in one fluidounce?

71. Suppose you should read that the dose of Tincture of Aconite is from .06 C.c. to .18 C.c., what would be the equivalence in minims?

72. What is the approximate measures of one teaspoonful in metric measures?

73. What is the unit of weight?

74. Repeat the Metric table of Weights.

75. How many milligrammes in a Gramme?

76. How many milligrammes in a decigramme?

77. How many milligrammes in a centigramme?

78. What is the difference between one decigramme and one Dekagramme?

79. What is understood by one Kilogramme?

80. Why is a Gramme abbreviated with a capital G; thus, Gm.?

81. What is the abbreviation for milligramme?

82. What is the abbreviation for centigramme?

83. What is the abbreviation for decigramme?

84. What is the abbreviation for Gramme?

85. What is the abbreviation for Dekagramme?

86. What is the abbreviation for Hectogramme?

87. What is the abbreviation for Kilogramme?

88. What is the abbreviation for Myriagramme?

89. What is the weight in grains of one Gramme?

90. What is the weight in grains of one milligramme?

91. How many milligrammes in one grain?

92. Write the corresponding metric equivalent of $\frac{1}{10}$ gr.

93. Write the corresponding metric equivalent of $\frac{1}{100}$ gr.

94. Write the corresponding metric equivalent of $\frac{1}{50}$ gr.

95. Write the corresponding metric equivalent of $\frac{1}{25}$ gr.

96. Write the corresponding metric equivalent of $\frac{1}{12}$ gr.

97. Write the corresponding metric equivalent of $\frac{1}{8}$ gr.

98. Write the corresponding metric equivalent of $\frac{1}{6}$ gr.

99. Write the corresponding metric equivalent of $\frac{1}{4}$ gr.

100. Write the corresponding metric equivalent of $\frac{1}{3}$ gr.

101. Write the corresponding metric equivalent of $\frac{1}{2}$ gr.

102. Write the corresponding metric equivalent of 2 gr.

103. How much water will a square vessel hold, 1 decimetre deep, 1 decimetre broad, and one decimetre long?

104. If this vessel were filled with distilled water at 4° C., and it were possible to divide this quantity of water into 1000 cubes of equal size, what would be the weight of each cube?

105. How would you read Gm. .001?

106. How would you read 1 mg.?

107. How would you read Gm. .065?

108. How would you read Gm. .0655?

109. How would you read Gm. .665?

110. How would you read Gm. 6.665?

111. How would you read Gm. 1000.?

112. If the dose of Morphine Sulphate is Gm. .016, and we should wish to give four doses, how much must be given?

113. Change the following Metric prescription into one written in the Apothecaries' scale:

℞. Hydrargyri oxidi flavi,	Gm.	.065;
Acidi borici,	Gm.	3.9;
Petrolati spissi,	Gm.	31.1.—Misce.

114. Change the following prescription into the Apothecaries' measure:

℞. Tincturæ aconiti,	C.c.	.06;
Syrupi,	C.c.	3.75;
Aquæ,	C.c.	30.—Misce.

115. Change the following prescription into the Apothecaries' scale:

℞. Morphinæ sulphatis,	Gm.	.130;
Atropinæ sulphatis,	Gm.	.016;
Spiritus ætheris nitrosi,	C.c.	7.50;
Syrupi,	C.c.	7.50;
Aquæ,	q. s. ad C.c.	90.—Misce.

Sig. Teaspoonful in water every two hours.

116. Convert the following prescription into the Metric scale:

℞. Extracti colocynthidis compositæ,	gr. i⅓;
Extracti jalapæ,	gr. ss;
Hydrargyri chloridi mitis,	gr. j;
Cambogiæ,	gr. ¼.—Misce.

Ft. pilula No. j.

ANSWERS.

1. 40,000,000 Metres in circumference.

2. 39.370432 inches, which is about 1 yard 3 inches and $\frac{3}{10}$ of an inch.

3. M. 1. M. 3. M. 5.

4. See page 24.

5. One-tenth part of a Metre.

6. There being $39\frac{37}{100}$ (39.370432) inches in one Metre, and a decimetre being one-tenth of a Metre, then there are $3\frac{937}{1000}$ inches in one decimetre, or almost four inches.

7. $7\frac{874}{1000}$ inches.

8. M. .1, or 1 dm.

9. One-hundredth part of a Metre.

10. $\frac{39}{100}$ of an inch, or about a third of an inch.

11. M. .01, or 1 cm.

12. One-thousandth part of a Metre.

13. $\frac{39}{1000}$ of an inch, or about $\frac{1}{25}$ of an inch.

14. Twenty-five. 25 mm. = 1 inch.

15. Two and fifty-four one-hundredths centimetres in an inch.

16. One hundred.

17. Ten.

18. One-thousandth of a *millimetre*, used only in microscopy.

19. One-twenty-fifth of an inch.

20. One millimetre.

21. One millimetre.

22. Five millimetres.

23. Fifty-five millimetres; we do not say five centimetres and five millimetres.

24. Fifty millimetres or five centimetres.

25. Five hundred millimetres. It may also be read five decimetres or fifty centimetres.

26. Two Metres.

27. Ordinarily read ten Metres, although one Dekametre would not be incorrect.

28. Two Dekametres.

29. One hundred Metres, or one Hectometre.

30. One thousand Metres, or one Kilometre.

31. Ten thousand Metres, or one Myriametre.

32. M. .001 or 1 mm.

33. M. .025 or 25 mm.

34. M. .100 or 100 mm.

35. M. .01 or 1 cm.

36. M. .10 or 10 cm.

37. They are the same.

38. M. .1 or 1 dm.

39. M. 10. or 1 Dm.

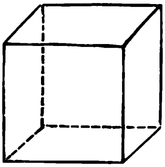
40. M. 200. or 2 Hm.

41. M. 3000. or 3 Km.

42. M. 40000. or 4 Mm.

43. A decimetre is only one-tenth of a Metre; a Dekametre is ten Metres.

44. A regular solid body, with six equal sides and equal angles, the measurement of each side being one Metre broad, one Metre long, and the diameter of this cube through any of its sides being one Metre.



45. Seventy-six and two-tenths millimetres; 76.2 mm., or M. .0762.

46. Cantharidal Pitch-plaster M .025 sq.

47. The Litre.

48. See page 25.

49. L. for Litre, dl. for decilitre, cl. for centilitre, and C.c., meaning cubic centimetre, instead of ml. for millilitre.

50. Dl. for Dekalitre, Hl. for Hectolitre, Kl. for Kilolitre, Ml. for Myrialitre.

51. $2\frac{113}{1000}$ pints.

52. $33\frac{814}{1000}$.
53. 1000 C.c.
54. 1 Gm. A C.c. is sometimes called a fluid gramme.
55. $15\frac{432}{1000}$ grains.
56. C.c. 3.75.
57. C.c. 30.
58. C.c. .06.
59. 16 minims.
60. Half an ounce.
61. Ten cubic centimetres.
62. Sixty-five cubic centimetres.
63. One Litre.
64. One cubic centimetre. (Also called one millilitre.)
65. Ten cubic centimetres. (Also read " one decilitre.")
66. Ten Litres, or one Dekalitre.
67. One hundred and one Litres.
68. One hundred and twenty-three Litres and four hundred and fifty-six cubic centimetres.
69. One cubic centimetre.
70. Thirty.
71. One to three minims.
72. A teaspoonful is supposed to hold 1 fluidrachm; in C.c. this would be 3.75.
73. The Gramme.
74. See page 25.
75. 1000.
76. 100.
77. 10.
78. One decigramme is one-tenth of a Gramme; a Dekagramme is ten Grammes.
79. One thousand Grammes.
80. It thoroughly distinguishes it from gr., the abbreviation of grain.
81. mg.

82. cg.
83. dg.
84. Gm.
85. Dg.
86. Hg.
87. Kg.
88. Mg.
89. $15\frac{432}{1000}$ grains.
90. $\frac{1}{65}$ grain.
91. 65 milligrammes in one grain.
92. The weight of one grain is Gm. .065; therefore the weight of one-tenth of a grain is—
$\frac{1}{10}$ of .065 = **.0065 Gm.**
93. $\frac{1}{100}$ of .065 = **.00065 Gm.**
94. $\frac{1}{50}$ of .065 = **.00130 Gm.**
95. $\frac{1}{25}$ of .065 = **.00260 Gm.**
96. $\frac{1}{12}$ of .065 = **.00547 Gm.**
97. $\frac{1}{8}$ of .065 = **.008 Gm.**
98. $\frac{1}{6}$ of .065 = **.01058 Gm.**
99. $\frac{1}{4}$ of .065 = **.016 Gm.**
100. $\frac{1}{3}$ of .065 = **.0216 Gm.**
101. $\frac{1}{2}$ of .065 = **.032 Gm.**
102. 2 × .065 = **.130 Gm.**
103. One Litre.
104. $15\frac{432}{1000}$ + grains, or 1 Gramme.
105. One milligramme.
106. One milligramme.
107. Sixty-five milligrammes.
108. Sixty-five and five-tenths milligrammes.
109. Six hundred and sixty-five milligrammes.
110. Six Grammes and six hundred and sixty-five milligrammes.
111. One Kilogramme.
112. 4 × 016 = .064 Gm.

113.

℞. Hydrargyri oxidi flavi, gr. j:
Acidi borici, ʒj:
Petrolati spissi, ℥j.—Misce.

114.

℞. Tincturæ aconiti, ♏j:
Syrupi, fʒj:
Aquæ, f℥j.—Misce.

115.

℞. Morphinæ sulphatis, gr. ⅛.
Atropinæ sulphatis, gr. ¼.
Spiritus ætheris nitrosi, fʒij:
Syrupi, fʒij:
Aquæ, q. s. ad f℥ij.—Misce.

116.

℞. Extracti colocynthidis compositæ. Gm. 0.16:
Ext. jalap., Gm. 0.032.
Hydrargyri chloridi mitis, Gm. 0.06:
Cambogiæ, Gm. 0.016.—Misce.
Ft. pilula No. j.

SYNONYMS OF COMMON DRUGS AN PREPARATIONS.

Synonyms.		English names.
Acetanilid	=	Antifebrin.
Allspice	=	Pimenta.
American hellebore, Poke-root	=	Veratrum viride.
American wormseed	=	Chenopodium.
Aqua fortis	=	Nitric acid.
Aqua regia	=	Nitromuriatic acid.
Baking powder	=	Sodium bicarbonate.
Balsam of fir	=	Canada turpentine.
Basham's mixture	=	Solution of iron and ammonium ac
Basilicon ointment	=	Resin cerate.
Bearberry	=	Uva ursi.
Biniodide of mercury	=	Red mercuric iodide.
Bittersweet	=	Dulcamara.
Black draught	=	Compound infusion of senna.
Black drop	=	Vinegar of opium.
Black wash	=	A mixture of calomel and lime-wate
Blancard's pill	=	Pill of ferrous iodide.
Blaud's pill	=	Pill of carbonate of iron.
Bleaching powder	=	Chlorinated lime.
Blistering cerate	=	Cantharidal cerate.
Blistering collodion	=	Cantharidal collodion.
Blood root	=	Sanguinaria.
Blue cohosh	=	Caulophyllum.
Blue flag	=	Iris.
Blue mass	=	Mass of mercury.
Blue ointment	=	Mercurial ointment.
Blue pill	=	Mass of mercury.
Blue stone, Blue vitriol	=	Copper sulphate.
Boneset, Thoroughwort	=	Eupatorium.
Brayera	=	Kusso.

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Synonyms.		**English names.**
Broom	=	Scoparius.
Brown mixture	=	Compound mixture of glycyrrhiza.
Buckthorn	=	Frangula.
Burnett's fluid	=	Solution of zinc chloride.
Cacao butter	=	Oil of theobroma.
Calabar bean	=	Physostigma.
Calomel	=	Mild mercurous chloride.
Camomile	=	Anthemis.
Canadian hemp	=	Apocynum.
Carron oil	=	Lime liniment.
Cetraria	=	Iceland moss.
Citrine ointment	=	Ointment of mercuric nitrate.
Clemen's solution	=	Solution of arsenic bromide.
Cold cream	=	Ointment of rose-water.
Copperas	=	Green vitriol = Ferrous sulphate.
Corrosive sublimate	=	Bichloride of mercury = Corrosive mercuric chloride.
Couch-grass	=	Triticum.
Court-plaster	=	Isinglass plaster.
Coxe's hive syrup	=	Compound syrup of squill.
Cramp-bark	=	Viburnum opulus.
Crane's bill root	=	Geranium.
Cream of tartar	=	Potassium bicarbonate.
Culver's root	=	Leptandra.
Dandelion	=	Taraxacum.
Deadly nightshade	=	Belladonna.
Diachylon ointment	=	Ointment of lead plaster.
Diachylon plaster	=	Lead plaster.
Dinner pill	=	Pill of aloes and mastic.
Dog button	=	Nux vomica.
Donovan's solution	=	Solution of arsenic and mercuric iodide.
Dover's powder	=	Powder of ipecac and opium.
Elixir of vitriol	=	Aromatic sulphuric acid.
Epsom salts	=	Magnesium sulphate.
Eserine	=	Physostigmine.
Felix mas, Male fern	=	Aspidium.
Fleming's tincture	=	A strong unofficial tincture of aconite.
Fowler's solution	=	Solution of potassium arsenite.
Foxglove	=	Digitalis.
Friar's balsam, Turlington balsam	=	Compound tincture of benzoin.

Synonyms.		English names.
German camomile	=	Matricaria.
Glauber's salt	=	Sodium sulphate.
Glusidum	=	Saccharin.
Goulard's cerate	=	Cerate of lead subacetate.
Goulard's extract	=	Solution of lead subacetate.
Gray powder	=	Mercury with chalk.
Green iodide of mercury	=	Protoiodide of mercury = Yellow mercurous iodide.
Green vitriol	=	Ferrous sulphate = Copperas.
Gregory's powder	=	Compound powder of rhubarb.
Griffith's mixture	=	Compound iron mixture.
Gum arabic	=	Acacia.
Gypsum, Plaster of Paris	=	Dried calcium sulphate.
Hartshorn	=	Ammonium hydrate.
Hemlock	=	Conium.
Henbane	=	Hyoscyamus.
Hoffman's anodyne	=	Compound spirit of ether.
Horehound	=	Marrubium.
Husband's magnesia, Calcined magnesia	=	Magnesia.
Huxham's tincture	=	Compound tincture of cinchona.
Iceland moss	=	Cetraria.
Indian hemp	=	Cannabis indica.
Indian tobacco	=	Lobelia.
Irish moss	=	Chondrus.
Iron by hydrogen, Quevenne's iron	=	Reduced iron.
Jaborandi	=	Pilocarpus.
James's powder	=	Antimonial powder.
Jamestown weed	=	Stramonium.
Kermes-mineral	=	Sulphurated antimony.
Labarraque's solution	=	Solution of chlorinated soda.
Lac sulphur	=	Precipitated sulphur.
Ladies' slipper	=	Cypripedium.
Lady Webster dinner pill	=	Pill of aloes and mastic.
Lanolin	=	Hydrated wool-fat.
Laudanum	=	Tincture of opium.
Lead-water	=	Dilute solution of lead subacetate.
Levant wormseed	=	Santonica.
Licorice powder	=	Compound powder of glycyrrhiza.
Lily of the valley	=	Convallaria.

Synonyms.		English names.
Litharge	=	Lead oxide.
Logwood	=	Hematoxylon.
Lugol's solution	=	Compound solution of iodine.
Lunar caustic	=	Moulded silver nitrate.
Magendie's solution	=	An unofficial aqueous solution of morphine sulphate (16 grs. to 1 f℥).
Male fern, Felix mas	=	Aspidium.
Mandrake root, May-apple	=	Podophyllum.
Marigold	=	Calendula.
Marshmallow	=	Altheæ.
Meadow saffron	=	Colchicum.
Mica panis	=	Bread-crumb.
Milk of asafœtida	=	Emulsion of asafœtida.
Mitigated caustic	=	Diluted silver nitrate.
Monkshood	=	Aconite.
Monsel's salt	=	Ferric subsulphate.
Monsel's solution	=	Solution of ferric tersulphate
Muriatic acid	=	Hydrochloric acid.
Nitre	=	Saltpetre = Potassium nitrate.
Nitroglycerine, Trinitrin	=	Glonoin.
Norwood's tincture	=	A strong unofficial tincture of veratrum viride.
Oil of vitriol	=	Sulphuric acid.
Paregoric	=	Camphorated tincture of opium.
Pearson's solution	=	Solution of sodium arsenate.
Pennyroyal	=	Hedroma.
Peroxide of hydrogen	=	Solution of hydrogen dioxide.
Peruvian bark, Jesuits' bark	=	Cinchona.
Phenazone	=	Antipyrin.
Pink root	=	Spigelia.
Plaster of Paris	=	Dried calcium sulphate.
Plummer's pill	=	Compound pill of antimony.
Poison ivy	=	Rhus toxicodendron.
Poke-berry	=	Phytolacca.
Pomegranate	=	Granatum.
Protoiodide of mercury, Green iodide of mercury	=	Yellow mercurous iodide.
Prussic acid	=	Hydrocyanic acid.
Pulvis purgans	=	Compound jalap powder.
Queen's root	=	Stillingia.

Synonyms. **English names.**

Quevenne's iron, Iron by hydrogen = Reduced iron.
Quicksilver = Mercury.
Red precipitate = Red mercuric oxide.
Rhatany = Krameria.
Rochelle salt = Potassium and sodium tartrate.
Rottlera = Kamala.
Sacred bark = Cascara sagrada.
Sal aĕratus = Potassium bicarbonate.
Sal ammoniac = Ammonium chloride.
Sal prunella = Fused potassium nitrate.
Sal soda = Sodium carbonate
Sal tartar = Potassium carbonate.
Sal volatile = Ammonium carbonate.
Sea onion = Squill.
Seidlitz powder = Compound effervescent powder.
Soluble glass = Solution of sodium silicate.
Spanish fly = Cantharis.
Spirit of mindererus = Solution of ammonium acetate.
Spirit of nitroglycerin = Spirit of glonoin.
Strengthening plaster = Iron plaster.
Sugar of lead = Lead acetate.
Sweet flag = Calamus.
Sweet spirit of nitre = Spirit of nitrous ether.
Sydenham's laudanum = Wine of opium.
Tartar emetic = Antimony or potassium tartrate.
Tincture of green soap = Liniment of soft soap.
Tully's powder = Compound powder of morphine.
Turpeth mineral = Yellow mercuric subsulphate.
Vallet's mass = Mass of ferrous carbonate.
Vienna paste = Potassa with lime.
Vinum portense = Port wine.
Vinum xericum = Sherry wine.
Virginia snakeroot = Serpentaria.
Volatile liniment = Liniment of ammonia.
Wahoo = Euonymus.
Warming plaster = Cantharidal pitch plaster.
Washing soda = Sodium carbonate.
White lead = Lead carbonate.
White precipitate = Ammoniated mercury.
Wild cherry = Prunus Virginiana.

Synonyms.		English names.
Wintergreen	=	Gaultheria.
Witchhazel	=	Hamamelis.
Wormwood	=	Absinthium.
Yellow jasmine	=	Gelsemium.
Yellow prussiate of potash	=	Potassium ferro-cyanide.
Yellow wash	=	Corrosive sublimate and lime-water.
Yerba santa	=	Eryodictyon.

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